As confidentially submitted to the Securities and Exchange Commission on November 13, 2023.
This draft registration statement has not been publicly filed with the
Securities and Exchange Commission and all information herein remains strictly confidential.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Tempus Labs, Inc.

(Exact name of Registrant as specified in its charter)

Delaware	**7370**	**47-4903308**
(State or other jurisdiction of incorporation or organization)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification Number)**

600 West Chicago Avenue, Suite 510
Chicago, Illinois 60654
(800) 976-5448
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Eric Lefkofsky
Chief Executive Officer, Founder and Chairman
Tempus Labs, Inc.
600 West Chicago Avenue, Suite 510
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(800) 976-5448
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement is declared effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☐
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant will file a further amendment which specifically states that this Registration Statement will thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement will become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS (Subject to Completion)
Issued , 2023

Shares

TEMPUS

CLASS A COMMON STOCK

This is an initial public offering of shares of Class A common stock of Tempus Labs, Inc. We are offering shares of our Class A common stock.

Prior to this offering, there has been no public market for our Class A common stock. It is currently estimated that the initial public offering price will be between $ and $ per share.

The selling stockholders identified in this prospectus have granted the underwriters the option to purchase up to an additional shares of Class A common stock on the same terms as set forth above within 30 days from the date of this prospectus to cover over-allotments, if any. We will not receive any proceeds from any sale of shares by the selling stockholders.

Following this offering, we will have two classes of common stock: Class A common stock and Class B common stock. The rights of the holders of Class A common stock and Class B common stock are identical, except with respect to voting, conversion and transfer rights. Each share of Class A common stock is entitled to one vote. Each share of Class B common stock is entitled to 30 votes and is convertible at any time into one share of Class A common stock. In addition, all shares of Class B common stock will automatically convert into shares of Class A common stock in certain circumstances, including on the date that our Chief Executive Officer, Founder and Chairman (i) ceases to serve as an executive officer or member of our Board of Directors or (ii) ceases to own, together with his controlled entities, at least 10,000,000 shares of our capital stock (as adjusted for stock splits, stock dividends, combinations, subdivisions and recapitalizations). See the section titled "Description of Capital Stock—Class A Common Stock and Class B Common Stock." Our Chief Executive Officer, Founder and Chairman will beneficially own 100% of our outstanding Class B common stock and will beneficially own approximately % of the voting power of our outstanding capital stock immediately following this offering, assuming no exercise of the underwriters' option to purchase additional shares of Class A common stock to cover over-allotments, if any. As a result, we will be a "controlled company" within the meaning of the corporate governance rules of the Nasdaq stock market, however, we have elected not to take advantage of the controlled company exemption.

We have applied to list our Class A common stock on the Nasdaq Global Select Market under the symbol "TEM."

We are an "emerging growth company" as defined under the federal securities laws and, as such, we have elected to comply with certain reduced reporting requirements for this prospectus and may elect to do so in future filings.

Investing in our Class A common stock involves risks. See "Risk Factors" beginning on page 24.

	Per Share	***Total***
Initial public offering price	*$*	*$*
Underwriting discounts and commissions (1)	*$*	*$*
Proceeds, before expenses, to Tempus Labs, Inc.	*$*	*$*
Proceeds, before expenses, to the selling stockholders (2)	*$*	*$*

(1) See "Underwriting" for additional information regarding compensation payable to the underwriters.
(2) Assumes the exercise in full of the underwriters' option to purchase additional shares of Class A common stock from the selling stockholders.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of Class A common stock to purchasers on , 2023.

MORGAN STANLEY *J.P. MORGAN* *ALLEN & COMPANY LLC*
BofA SECURITIES *TD COWEN*
STIFEL *WILLIAM BLAIR*
LOOP CAPITAL MARKETS *NEEDHAM & COMPANY*

Prospectus dated , 2023.

TABLE OF CONTENTS

	Page		Page
Prospectus Summary	1	Executive Compensation	209
Risk Factors	24	Certain Relationships and Related Party Transactions	221
Special Note Regarding Forward-Looking Statements	95	Principal and Selling Stockholders	226
Market, Industry and Other Data	97	Description of Capital Stock	229
Use of Proceeds	99	Shares Eligible for Future Sale	237
Dividend Policy	100	Material U.S. Federal Income Tax Consequences of Non-U.S. Holders of Our Class A Common Stock	240
Capitalization	101	Underwriting	244
Dilution	104	Legal Matters	253
Management's Discussion and Analysis of Financial Condition and Results of Operations	108	Experts	253
Business	133	Where You Can Find Additional Information	254
Management	201	Index to Consolidated Financial Statements	F-1

Neither we, the selling stockholders, nor any of the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. Neither we, the selling stockholders, nor any of the underwriters take responsibility for, or can provide any assurance as to the reliability of, any other information that others may give you. We, the selling stockholders and the underwriters are offering to sell, and seeking offers to buy, shares of our Class A common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our Class A common stock.

For investors outside the United States: neither we, the selling stockholders, nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our Class A common stock and the distribution of this prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our Class A common stock. You should read this entire prospectus carefully, including the sections titled "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision. Unless the context otherwise requires, all references in this prospectus to "Tempus," the "company," "we," "our," "us" or similar terms refer to Tempus Labs, Inc. and its subsidiaries.

Overview

We endeavor to unlock the true power of precision medicine by creating Intelligent Diagnostics through the practical application of artificial intelligence, or AI, in healthcare. Intelligent Diagnostics use AI, including generative AI, to make laboratory tests more accurate, tailored, and personal. We make tests intelligent by connecting laboratory results to a patient's own clinical data, thereby personalizing the results. Our novel insight was realizing that all laboratory test results, genomic or otherwise, could be contextualized for a specific patient based upon that patient's unique characteristics, and technology could therefore guide therapy selection and treatment decisions to allow each patient to progress on their own unique path. The drugs recommended, the clinical trials explored, the care pathways evaluated, the adverse events considered—all have the potential to be refined and enhanced when test results are connected to a patient's personal profile, enabling the right patient to be routed to the right therapy at the right time.

To accomplish this, we built the Tempus Platform, which comprises both a technology platform to free healthcare data from silos and an operating system to make the resulting data useful. Our proprietary technology has allowed us to amass what we consider to be one of the largest libraries of clinical and molecular oncology data in the world. Our goal is to embed AI, including generative AI, throughout every aspect of diagnostics to enable physicians and researchers to make personalized, data-driven decisions that improve patient care.

The ability to deploy AI in precision medicine at scale has only recently become possible. Advances in cloud computing, imaging technologies, large language models, and low-cost molecular profiling, along with the digitization of vast amounts of healthcare data, have created a landscape that we believe is finally ripe for AI. However, despite an increase in the availability of healthcare data, physicians and researchers are largely unable today to leverage this data to improve patient care. The vast majority of healthcare data remains disconnected and lacks harmonization and structure. Traditional diagnostic tests are typically based only on a single data modality, such as a blood- based biomarker or a genomic mutation, and do not connect and integrate other forms of relevant clinical data, such as outcomes, or adverse events, or pathology results, which are essential for many clinical decisions.

In order to bring AI to healthcare at scale, we began by rebuilding the foundation of how data flows in and out of healthcare institutions. We established data pipes, going to and from providers, to allow for the free exchange of data between physicians, who interpret data, and diagnostic and life science companies, who provide data. Without this capability, we believe that data could continue to accumulate without impacting patient care. Tempus has built this integrated Platform, and we are now deploying it at scale in the United States in oncology, and other areas, including neuropsychology, radiology, and cardiology, with aspirations to eventually be in all major disease areas globally. Our Platform connects multiple stakeholders within the larger healthcare ecosystem, often in near real time, to assemble and integrate the data we collect, thereby providing an opportunity for physicians to make data-driven decisions in the clinic and for researchers to discover and develop therapeutics.

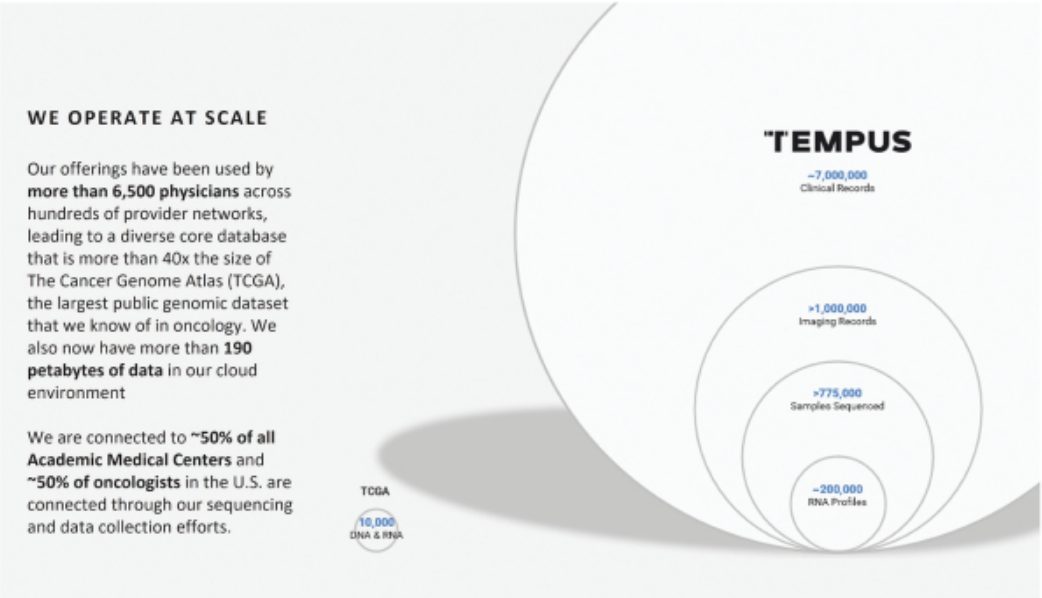
Tempus is a technology company focused on healthcare that straddles two converging worlds. We strive to combine deep healthcare expertise, providing next-generation diagnostics across multiple disease areas, with leading technology capabilities, harnessing the power of data and analytics to help personalize medicine. Unlike traditional diagnostic labs, we can incorporate unique patient information, such as clinical, molecular, and imaging data, with the goal of making our tests more intelligent and our results more insightful. Unlike technology companies, we are deeply rooted in clinical care delivery as one of the largest sequencers of patients in the United States. Straddling both worlds is advantageous as we believe Intelligent Diagnostics represent the future of precision medicine, informing more personalized and data-driven therapy selection and development.

Our Platform includes proprietary software and dedicated data pipelines that create a network of healthcare institutions through more than 500 unique data connections, many of which supply us with complex multimodal data in near real time, across approximately 2,000 healthcare institutions that order our products and services. Healthcare institutions supply us with this data in our capacity as a covered entity (for example, when we provide Next Generation Sequencing, or NGS, services on behalf of a patient), or as a business associate (for example, when we provide clinical trial matching services or data de-identification and structuring services). In addition to the data we receive in these capacities, we currently have a limited number of paid license agreements through which we acquire de-identified data directly from healthcare associations or institutions, and in certain circumstances we cover the actual direct costs associated with the technical integrations needed to create a data connection. We then integrate this data into a unified multimodal database through which we offer numerous analytical and decision support capabilities to our customers. We establish dedicated and integrated data connections with healthcare institutions to enhance the information we provide in our clinical reports, to increase the effectiveness of our clinical trial matching services, and to enable our AI Applications product line, which we believe has the ability to transform healthcare.

We have launched a suite of different products derived from our Platform, which have gained significant traction over the past five years. To date, our offerings have been used by approximately 95% of the largest public pharmaceutical companies based on 2022 revenue, and our clinical NGS volume in oncology rose from approximately 31,000 samples in 2018 to approximately 207,000 samples in 2022. Through September 30, 2023, our offerings have been used by more than 6,000 physicians across hundreds of provider networks, including more than half of all academic medical centers in the United States. Our database of multimodal, de-identified records has grown to be more than 40 times the size of The Cancer Genome Atlas, the largest public genomic dataset that we know of in oncology. We also now have more than 190 petabytes of data in our cloud environment. Between our sequencing and data collection efforts, we are connected in some way to more than 50% of all oncologists practicing in the United States. Our access to broad and diverse data serves as the basis for our ability to train generative AI models, and we believe our relationships with healthcare institutions provide us with proprietary data to deliver on the promise of AI in healthcare.

We originally set out to build a sustainable business model in oncology as our first proof of concept. To date, we have focused primarily on establishing and growing our oncology business, which represents the majority of both the data we have amassed and our revenues. Even though our cancer business was at an early stage, we next expanded into neuropsychology, as we believed our model was extensible across disease areas. Having gained early traction in depression, we then expanded into the radiology and cardiology categories. Each time we enter a new disease area we look to expand upon the model we deployed in oncology by developing Intelligent Diagnostics connected to clinical data, and by leveraging large amounts of de-identified data to advance patient care and accelerate drug discovery and development. Once we obtain sufficient data, which we can leverage as a proprietary training data set for generative AI applications, we expect to deploy our AI and machine learning capabilities to build algorithmic diagnostics at scale across diseases.

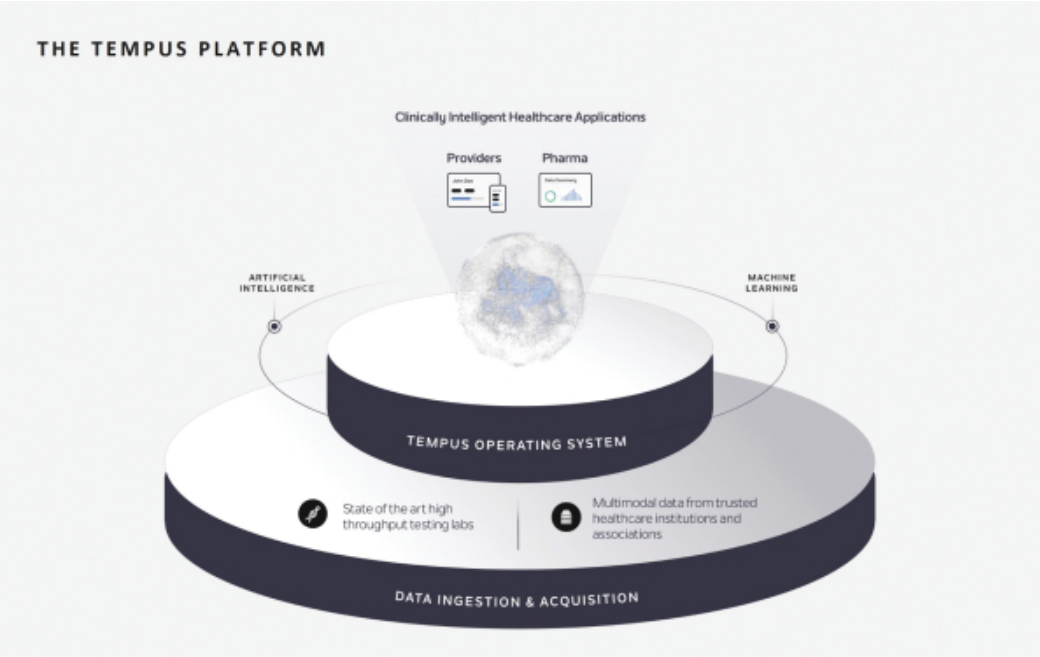
To manage our growth, we have assembled a world-class team of approximately 2,000 employees, including hundreds with diverse expertise across genetics, molecular and computational biology, bioinformatics, regulatory affairs, medical, product and engineering, and data science. Roughly one-third of our team is technical, with approximately 250 PhDs and MDs on staff.



We generated total revenue of $257.9 million and $320.7 million in the years ended December 31, 2021 and 2022, respectively, and $220.0 million and $384.1 million in the nine months ended September 30, 2022 and 2023, respectively. Revenue generated from COVID-19 testing was $94.7 million, or 36.7% of our total revenue, and $22.2 million, or 6.9% of our total revenue, for the years ended December 31, 2021 and 2022, respectively, and $17.5 million, or 7.9% of our total revenue, for the nine months ended September 30, 2022. Revenue generated from COVID-19 testing was $2.7 million, or 0.7% of total revenue, for the nine months ended September 30, 2023, as we stopped offering COVID-19 PCR diagnostic tests in the first quarter of 2023. We incurred net losses of $259.2 million and $289.8 million in the years ended December 31, 2021 and 2022, respectively, and $223.5 million and $163.6 million in the nine months ended September 30, 2022 and 2023, respectively.

The Tempus Platform

The Tempus Platform combines multiple elements into a vertically integrated infrastructure that enables us to ingest data from providers, structure and harmonize the data into a common database, provide laboratory diagnostic testing when requested, and deliver personalized results that provide clinical context by leveraging our data. We offer closed-loop, full-stack, bi-directional integrations between a clinician's desktop and our laboratory diagnostic capabilities, analytics platform, and vast repository of multimodal data. The key elements of our Platform, represented in the diagram below, collectively help power a variety of healthcare applications for providers and life sciences researchers. We believe each of these elements is difficult for competitors to replicate, and together represent a significant competitive advantage.



Data Ingestion and Acquisition

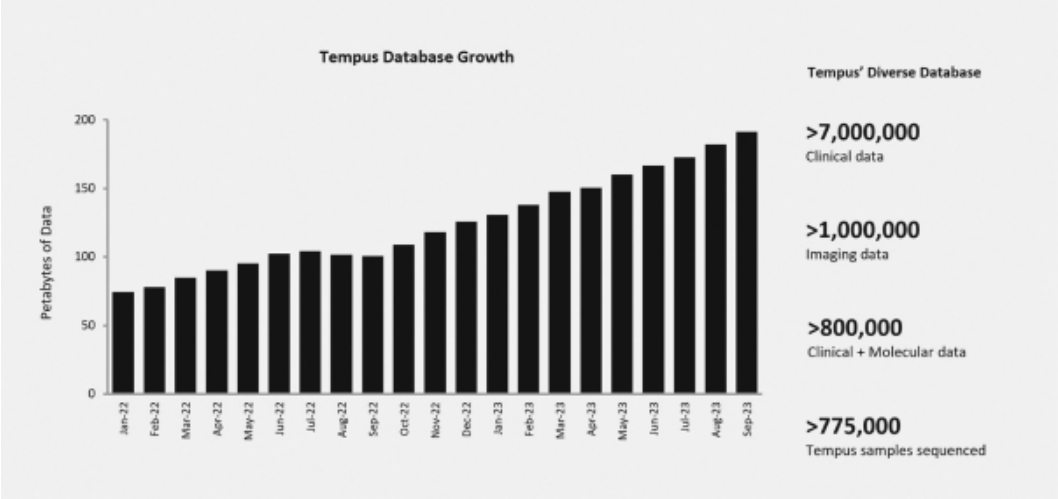
We ingest healthcare data in near real time and at scale, including molecular, clinical, and imaging data. We developed the software infrastructure and dedicated data pipelines to aggregate large amounts of multimodal data directly from healthcare institutions. Our software connects to a provider's electronic health record, or EHR, system, data warehouse, or third-party data provider to pull relevant structured and unstructured data that the provider has agreed to make available to us, or which is necessary to provide our diagnostic tests, including longitudinal follow-up data in certain circumstances. We have established relationships with hundreds of provider networks in the United States, including approximately half of all academic medical centers. In addition, we work with numerous industry associations, including the American Society of Clinical Oncology, or ASCO, to structure and distribute the cancer data that they collect as part of CancerLinq, which is their oncology data effort, as well as the National Cancer Care Alliance, or NCCA, the Quality Cancer Care Alliance, or QCCA, and others. We also generate data in our three high-throughput diagnostic testing labs in Chicago, Atlanta, and Raleigh.

Proprietary Data Processing

Once we ingest data, we deploy proprietary clinical data abstraction tools, including natural language processing, optical character recognition, and our abstraction software, to structure, harmonize, and de-identify the data we collect. We have developed various software tools, including algorithmic agents that leverage large language models, to streamline and help secure this process. Once appropriately de-identified, we store the data in our multimodal database.

Our Proprietary Multimodal Database

We believe most healthcare databases lack real-time functionality, depth among data types, and the scale of matched clinical and molecular records needed to meaningfully improve therapeutic research and development. Tempus is attempting to solve this problem by democratizing the use of near real-time molecular, clinical and imaging data by embedding our solution into the clinical care of patients. As our testing volume has grown, and as our dedicated data pipelines have expanded, the size of our database has increased exponentially. Since we launched our Platform in 2016, Tempus has amassed over 800 million documents, across more than 5.7 million de-identified patient records, including approximately 1.3 billion pages of rich clinical text that we use to train our large language models. The database also includes over 1,000,000 records with imaging data, more than 800,000 with matched clinical records linked with genomic information, and approximately 200,000 with full transcriptomic profiles. Within oncology specifically, we believe this represents one of the largest and most comprehensive molecular libraries of cancer patients in the world. The breadth of our database, the quality and diversity of our data, as well as its regularly updating nature, allow us to offer a variety of AI-enabled solutions to the market. We believe our unique data set will enable us to bring the benefits of generative AI and large language models to healthcare, as our curated, multimodal database can be used as a proprietary training set to build a variety of AI-based applications, which we intend to deploy through our existing network and distribution platform. We also retain the rights to broadly commercialize de-identified data. As our database continues to grow from its current size of more than 190 petabytes, we believe new AI applications and opportunities will emerge that are only possible with scale that will drive further innovations in patient treatment. The graph below shows our historical database growth and its composition as of September 30, 2023:



Proprietary Software Tools and Solutions

We have developed numerous software tools that power our Platform, making our services accessible to multiple constituencies within the healthcare ecosystem and creating a back-end infrastructure that supports our various product lines. We employ AI techniques including neural networks, deep learning, large language models, and other statistical learning techniques to generate patient-specific insights. We are able to not only train and validate some of these AI models for research use, but we can also develop them into clinical-grade algorithmic tests, or Algos, and deploy them clinically as part of routine care. As our data advantage and system architecture continue to improve, we believe our existing Intelligent Diagnostics will gain further adoption thereby accelerating our ability to deploy technologies, including AI Applications, in the clinical setting.

Our Three Product Lines

We have developed multiple products derived from our Platform that are designed to create an economic model that allows us to invest in structuring and harmonizing data, which is a necessary precursor for deploying AI at scale. Our products are organized under three product lines, each of which is designed to enable and enhance the others, thereby creating network effects in each of the markets in which we operate. We started in Genomics by generating large amounts of molecular data, which in turn gave rise to our Data and Services business through which we licensed de-identified data, which at scale has allowed us to provide a series of data-related services to our life sciences customers, such as clinical trial matching, or Trials. Over time, we expect these products (Genomics + Data and Services) to facilitate deployment of our AI Applications, or Algos, product line through which we will leverage AI models to help route patients to the optimal therapy and advance research more broadly. Our business model allows both Tempus and our customers to unlock value from the data we make available in different ways across our different product lines. We believe these network effects provide a unique advantage to our business, as the compounding value of each data record in our database serves to enhance our competitive advantage. The more data we collect, the smarter our tests become, the more applications we can launch, the more physicians join our network, further growing our database, making our tests smarter for clinicians and our database more valuable for researchers.

We describe below our three product lines—Genomics, Data and Services, and AI Applications. Genomics revenue was $151.9 million, $195.0 million and $198.0 million for the years ended December 31, 2020, 2021 and 2022, respectively, and $140.1 million and $270.8 million for the nine months ended September 30, 2022 and 2023, respectively. Data revenue was $36.1 million, $62.8 million and $122.7 million for the years ended December 31, 2020, 2021 and 2022, respectively, and $80.0 million and $113.3 million for the nine months ended September 30, 2022 and 2023, respectively. For the years ended December 31, 2020, 2021 and 2022, Genomics represented 81%, 76% and 62%, respectively, and Data represented 19%, 24% and 38%, respectively, of our total revenue. Revenue generated from AI Applications is reported within Data and services in our Consolidated Statement of Operations and was less than $1.0 million for the years ended December 31, 2020 and 2021, respectively, and was $1.4 million for the year ended December 31, 2022. Revenue generated from AI Applications was less than $1.0 million for the nine months ended September 30, 2022 and 2023.

Genomics

Our Genomics product line leverages our laboratories to provide NGS diagnostics, molecular genotyping, and other anatomic and molecular pathology testing to healthcare providers, life sciences companies, researchers, and other third parties. We operate robotic sequencing labs in Chicago, Atlanta, and Raleigh, with automated bioinformatics and variant classification and reporting that allow us to operate as a high-quality, low-cost NGS provider that broadly serves the market. Our labs are certified by the Clinical Laboratory Improvement Amendments, or CLIA, and accredited by the College of American Pathologists, or CAP. However, unlike other laboratory diagnostic testing providers, many of our tests are connected to clinical data in some manner, which allows our suite of tests to be self-learning, becoming more accurate and precise with each new test that we run. Our current primary assays include:

- xT – 648 gene solid tumor cancer assay;
- xR – full transcriptome (RNA) solid tumor cancer assay;
- xT-cdx – 648 gene, tumor/normal FDA approved assay;
- xE – whole exome cancer assay;
- xF – 105 gene liquid biopsy cancer assay;
- xG – 52 gene inherited cancer risk germline assay;
- nP – pharmacogenomics profiling in neuropsychology;
- xF+ – expanded 523 gene panel covering additional fusions and copy number variants, or CNVs, as well as blood tumor mutational burden, or bTMB, and microsatellite instability high, or MSI-H; and

- xG+ – 88 gene panel covering genes associated with both common and rare hereditary cancers.

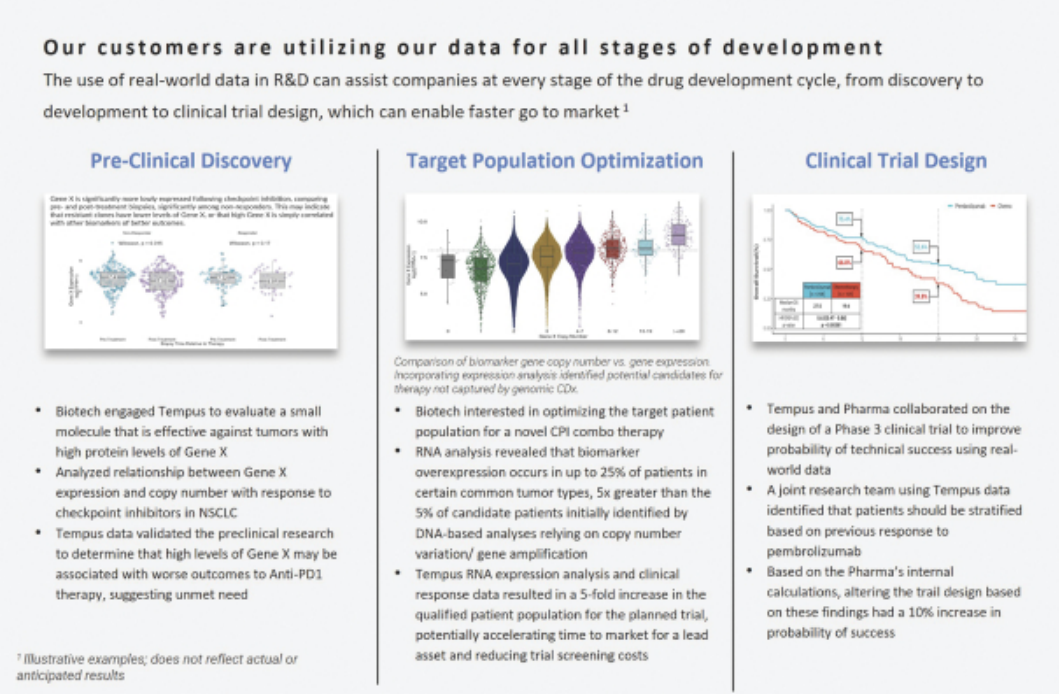
We are also currently validating xM, a joint methylation signature and variant workflow for minimal residual disease detection.

As we have continued to expand our laboratory testing offerings and scale, in addition to increasing reimbursement for our tests, we have achieved continued improved margins. Genomics margin, adjusted for the impact of COVID-19 testing, was (21%), 4%, 25%, and 49% for the years ended December 31, 2020, 2021, and 2022, and the nine months ended September 30, 2023, respectively.

Our cancer tests have gained wide market adoption and allowed us to amass what we consider to be one of the largest de-identified clinical and molecular oncology datasets in the world, which we make available to physicians and life sciences companies. Because our Platform is designed to be extensible across disease areas, we hope, over time, to have similar success in neuropsychology, cardiology, and the other disease categories in which we choose to expand.

Data and Services

Our Data and Services product line facilitates drug discovery and development for life sciences companies through two primary products, Insights and Trials. Through our Insights product, we license libraries of linked clinical, molecular, and imaging de-identified data and provide a suite of analytic and cloud-and-compute tools to pharmaceutical and biotechnology companies. Historically, datasets in healthcare have been siloed, often lacking important contextual information such as outcome and treatment response data. Our Insights offering is designed to address this void across multiple diseases, enabling pharmaceutical and biotechnology companies to improve decision-making across the drug lifecycle—from discovery, research and development, and, ultimately, commercialization.



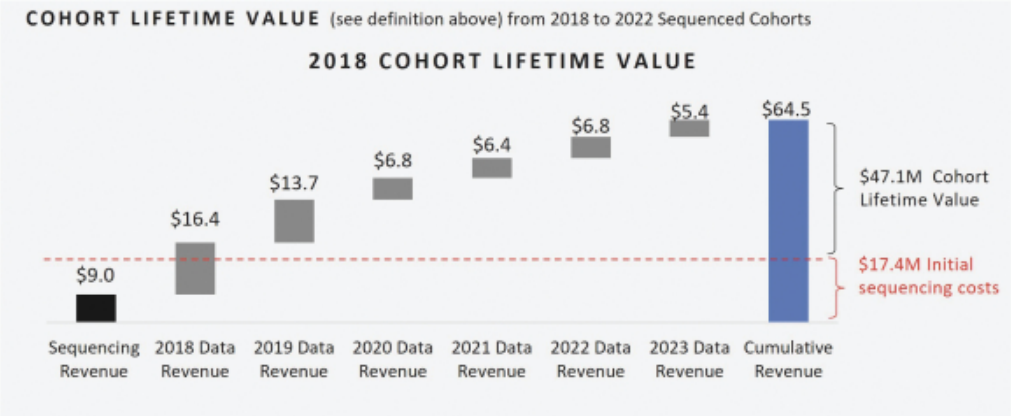
Customers either pay us on a per file basis or through multi-year data licensing agreements to access our de-identified database of clinical records. We work with 19 of the 20 largest public pharmaceutical companies based on 2022 revenue, and as of September 30, 2023, we have signed contracts with a remaining total contract value of more than $785.0 million, which includes approximately $300.0 million in additional potential future contractual opt-ins. See “Business” for additional discussion regarding our remaining total contract value.

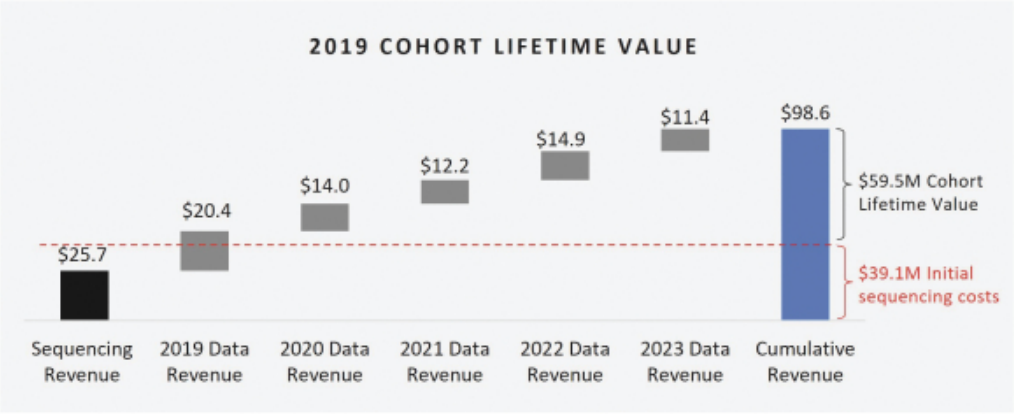
We retain broad rights to commercialize most of the de-identified data we collect, and we are able to license the same de-identified records to multiple customers. Additionally, because many of our data profiles regularly update with clinical outcome and response data, the value of a single de-identified record can increase over time.

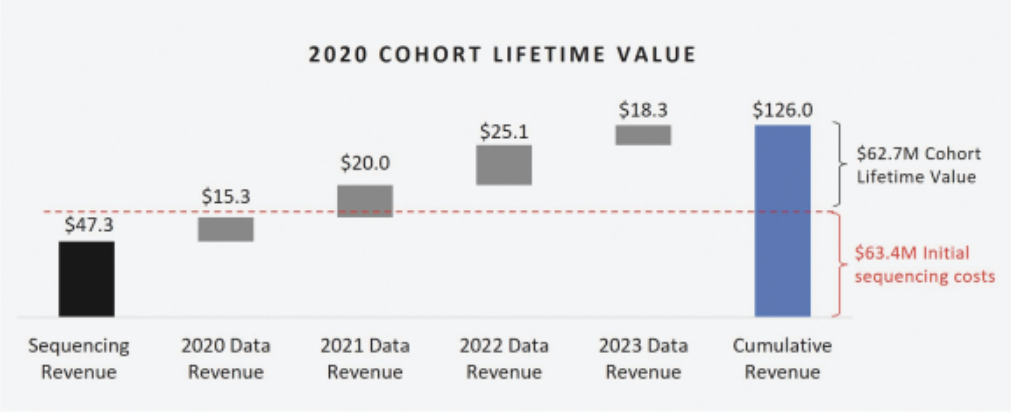
To illustrate one of the ways that our business model differs from traditional diagnostics companies, we present below the “Cohort Lifetime Value” derived from records in our de-identified dataset based on the year of data generation. We define “Cohort Lifetime Value” as the cumulative revenue attributable to a specific cohort of de-identified records, including revenue derived both from the initial sequencing (Genomics) and licensing and related services (Data and Services), less the initial sequencing costs incurred to generate the data ultimately licensed. Sequencing revenue is a component of genomics revenue in our Consolidated Statement of Operations and differs from total genomics revenue due to other components, including COVID-19 PCR testing and other lab services unrelated to our data business. Data and Services revenue is a component of Data and services revenue in our Consolidated Statement of Operations and represents the revenues recognized in each period attributable to each cohort. Initial sequencing costs are a component of Cost of revenue, genomics in our Consolidated Statement of Operations and include laboratory personnel compensation and benefits, as well as the cost of laboratory supplies and consumables, depreciation of laboratory equipment, shipping costs, and certain allocated overhead expenses. Total initial sequencing costs differ from total Cost of revenues, genomics due to other components, including costs associated with COVID-19 PCR testing and other lab services unrelated to our data business. Notably, “Cohort Lifetime Value” does not include costs reported as Cost of revenues, data and services in the Consolidated Statement of Operations. Cost of revenues, data and services were $11.9 million and $40.2 million for the years ended December 31, 2021 and 2022, respectively. These costs represent 19.0% and 32.8% of data and services revenue for the years ended December 31, 2021 and 2022, respectively.

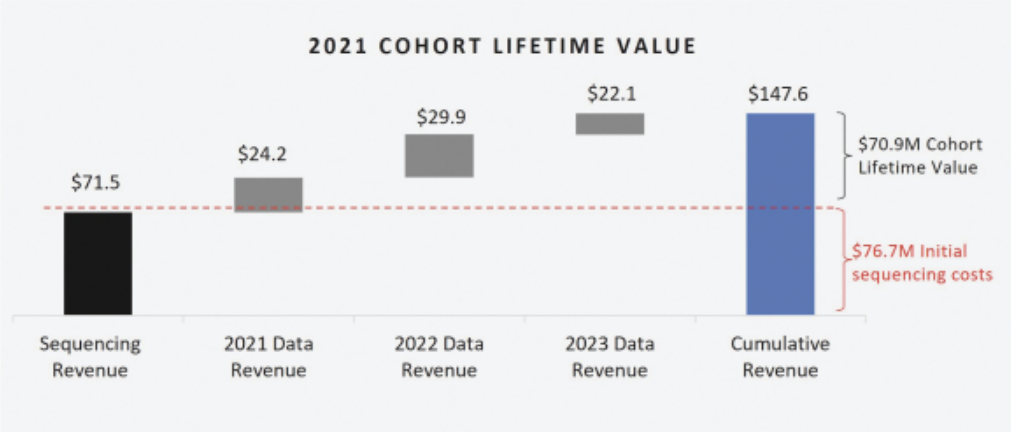
In 2018, the first full year that we operated a laboratory, we sequenced samples from approximately 7,500 patients. From that 2018 cohort of sequenced patients, through September 30, 2023, we generated $64.5 million of combined revenue from sequencing, data licensing of de-identified data derived from those records, analytical services, and clinical trials matching, which is approximately 7.2 times the revenue we received from sequencing of that cohort in the initial year. The total cost to sequence the 2018 cohort was $17.4 million, of which $9.0 million was covered by reimbursement for the corresponding sequencing tests. We then generated $16.4 million of data revenue from that cohort in 2018, finishing the year with a “Cohort Lifetime Value” of $8.0 million. As more customers licensed de-identified records from the 2018 cohort in subsequent years, we generated additional revenue in 2019, 2020, 2021 and 2022 from the 2018 cohort, and as of September 30, 2023, the 2018 “Cohort Lifetime Value” was $47.1 million. We experienced similar trends for the 2019, 2020, 2021, and 2022 cohorts. As of September 30, 2023, the 2019 “Cohort Lifetime Value” was $59.5 million, the 2020 “Cohort Lifetime Value” was $62.7 million, the 2021 “Cohort Lifetime Value” was $70.9 million, and the 2022 “Cohort Lifetime Value” was $75.4 million.

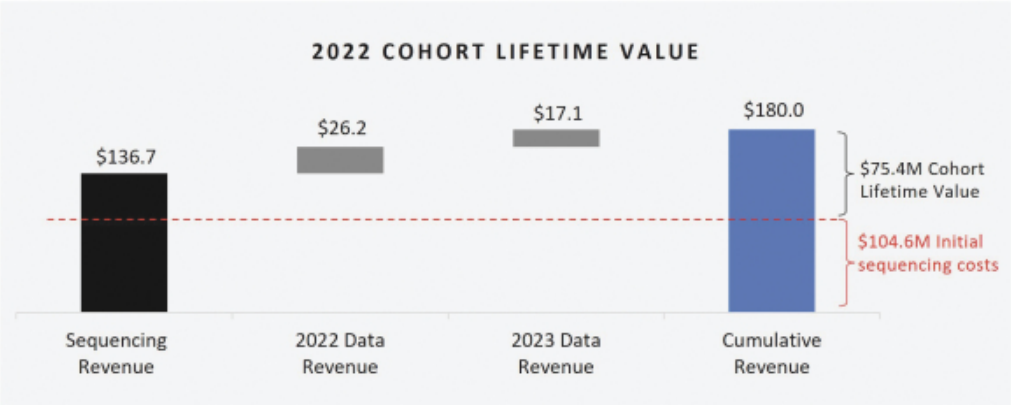
"Cohort Lifetime Value" for the 2018 to 2022 data cohorts is illustrated in the graphs below. Figures shown in "2023 Data Revenue" represent revenue through September 30, 2023.











Our second focus area within our Data and Services product line, Trials, is a suite of services designed to leverage the broad network of physicians we work with in oncology to provide clinical trial support for pharmaceutical companies that are looking to reach hard-to-find and underserved patient populations. Our clinical trial matching product, which we refer to as TIME, is built on top of our near real-time data feeds and harnesses AI to accelerate the connection between patients, clinical trial sites (hospitals), and clinical trial sponsors (life sciences companies). We empower both oncologists to help their patients find clinical trials and pharmaceutical companies to enroll patients into their trials. We generate revenue from both matching the patient to the trial (through notices we send to physicians alerting them of potential trials that are a fit for their patients), and from the patient actually enrolling in the trial. Since its introduction, this program has gained significant traction with more than 3,000 oncologists fully enrolled, more than 220 clinical trials signed into the network, and more than 25,000 patients were identified for potential enrollment into clinical trials in our network, as of September 30, 2023. We believe the breadth of our network, the data to which we have near real-time access, and our relationships with oncologists enable us to offer a clinical trial matching service that has the potential to materially expand patient access to and accelerate enrollment in clinical trials in the United States.

In addition to TIME, we provide other clinical trial services and conduct our own studies as part of our Trials program, all with a goal of identifying new therapies and bringing them to market more efficiently. In January 2022, we acquired Highline Consulting, LLC, a contract research organization, or CRO, which we

subsequently renamed Tempus Compass. Tempus Compass manages and executes early and late-stage clinical trials, primarily in oncology. We also partner with life sciences companies to sponsor studies of drugs, devices, and diagnostics, integrating our life science solutions to help bring new drugs to market faster. Each of the products and services within our Trials program complement each other to create a suite of integrated solutions for life sciences companies from early discovery to commercialization.

AI Applications

Our third product line, AI Applications, or Algos, is focused on developing and providing diagnostics that are algorithmic in nature, implementing new software as a medical device, and building and deploying clinical decision support tools. The primary product of AI Applications is currently "Next," an AI platform that leverages machine learning to apply an "intelligent layer" onto routinely generated data to proactively identify and minimize care gaps for oncology and cardiology patients. As this product gains adoption, we intend to leverage large language models, generative AI algorithms, and our vast database of de-identified data to develop algorithmic diagnostics designed to identify these patients earlier in their disease progression, when treatments are most effective.

Within oncology, we offer a suite of algorithmic tests as complements to our NGS assays, including our tumor origin test, or TO test, our homologous recombination deficiency test, or HRD test, and our Dihydropyrimidine Dehydrogenase Deficiency, or DPYD test. Our TO test is designed to predict the site of origin for cancer patients for whom the primary tumor site is unknown, which represents approximately 3% of cancer patients. Our TO test compares the molecular profile of the tumor with profiles of other cancers in our database. Our HRD test is designed to identify patients who might be sensitive to poly (ADP-ribose) polymerase inhibitors, or PARP inhibitors, which we estimate represent approximately 936,000 addressable patients in breast, ovarian, pancreatic, and prostate cancer patients. Identifying which patients are PARP sensitive can help physicians pursue specific courses of treatment, which may meaningfully prolong the patient's life expectancy. Our DPYD test is designed to identify certain alterations in the DPYD gene, which may be associated with a patient's potential toxicity to 5-FU/Capecitabine chemotherapy based on the associated drug labeling and guidelines from the Clinical Pharmacogenomics Implementation Consortium, or CPIC.

In cardiology, we ingest multimodal data and use over 60 algorithms to identify potential care gaps and continuously monitor patient data to find at-risk patients who may be falling through a care gap unbeknownst to their physician, and automatically notify care teams of any needed follow-up or likely disease progression. More than 80 hospitals nationwide are currently powered by Tempus Next and more than 35,000 patients are screened per month. We are also developing algorithmic models that aid clinicians in identifying patients at increased risk of developing atrial fibrillation, or AFib, along with a variety of other cardiac conditions. These Algos are trained using de-identified data derived from approximately 3.5 million electrocardiograms, or ECGs, across more than 700,000 patients, with decades of longitudinal connected clinical data, including outcome and response data. As part of this initiative, the U.S. Food and Drug Administration, or FDA, awarded Tempus breakthrough designation status for an algorithm to predict AFib from a normal ECG for certain populations. Approximately 3.5% of all ECG results appear not to have AFib upon initial read, yet a major cardiac trauma or stroke occurs in these patients within a year. We estimate that approximately 300 million ECGs are run annually worldwide, and accordingly, this group of algorithms could affect up to ten and a half million patients each year.

We are also advancing Algos that are designed to predict aortic stenosis, and we are working on other disease areas within cardiology, such as low ejection fraction and familial hypercholesterolemia. If broadly deployed, we believe these Algos could have widespread clinical applicability, increase life expectancy, and reduce the total cost of care.

In addition to algorithms based on NGS testing or in the cardiology space, we offer, or are developing, a suite of algorithms derived from radiologic images and digital pathology slides. In October 2022, we acquired Arterys, Inc., a company that provides a platform to derive insights from radiologic medical images to improve

diagnostic decision-making, efficiency, and productivity across multiple disease areas. We have also developed algorithms based on Immunohistochemistry, or IHC, and H&E staining, which can be used, among other things, to help identify patients who may be eligible for additional treatments or clinical trials.

Our AI Applications product line represents an emerging category of diagnostics and has the potential to be highly disruptive across diagnostic tests in a broad set of disease areas. We believe that as our database grows, we will be able to expand our offerings, representing a significant long-term opportunity that may be substantially larger than our other existing product lines. We believe our ability to launch generative AI Applications at scale could be a unique differentiator of our Platform. For each AI Application, we use data the same way legacy diagnostic companies use chemistry in the battle against disease, attempting to improve patient care by learning from the patients who have come before, and tailoring test results based on a patient's unique profile. Some Algos will likely yield little to no reimbursement until their clinical utility is well established, and some may obtain reimbursement at prevailing rates for comparable tests.

Market Opportunity

We believe our Platform's impact on healthcare could be profound, and that quantifying our potential market opportunity is challenging, especially for opportunities like Algos that are in their infancy. Our Platform is particularly well suited when there exists both heterogeneous conditions that make up a diseased population and a variety of potential therapeutics or therapeutic pathways, often prescribed based on trial and error. When these conditions exist, technology and AI can facilitate precision medicine through data associations that substantially reduce the guesswork associated with which drug to prescribe, in what amount, and in which order. We are currently focused on oncology, neuropsychology, cardiology, and radiology, in which there is over $3 trillion of economic burden according to publicly available sources.

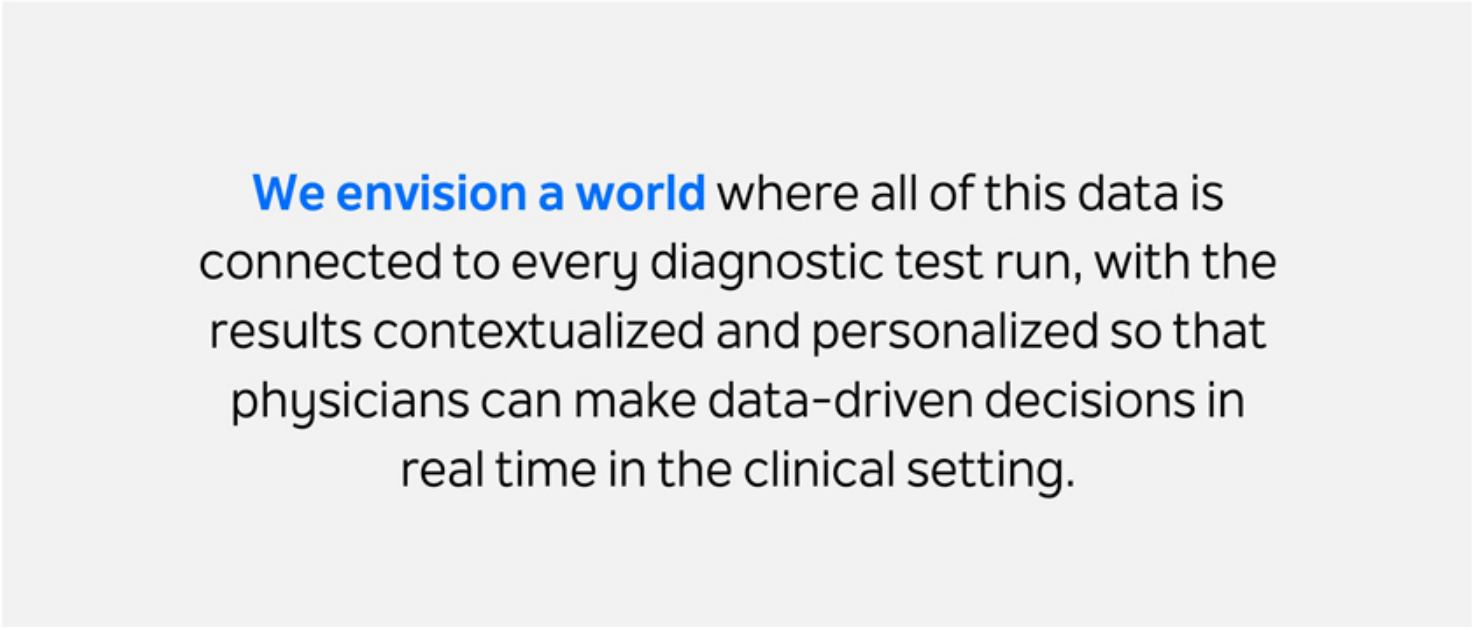
Within these markets, our Platform addresses both the clinical diagnostic testing market as well as the market for therapeutic research and development. Our Genomics product line targets an addressable market opportunity for diagnostic testing services that we estimate at over $70 billion across just oncology and neuropsychology. Our Data and Services product line operates within a market in which life sciences companies spent an estimated $238 billion in 2022 on research and development according to Evaluate Pharma, and addresses needs within the $42 billion clinical trial services market, the $62 billion market for biomarker discovery, and the $29 billion market for third party research for "real world evidence", as estimated according to Mordor Intelligence and our internal estimates. Over time, we believe that the potential market opportunity for our AI Applications product line could be substantially larger than our other product lines combined.

Long-Term Vision

We are in the early stages of addressing the significant market opportunity that is emerging as AI permeates healthcare. Based on our current customer adoption, Tempus has already built what we consider to be one of the largest multimodal datasets for cancer patients in the world (with other diseases following). We believe our competitive advantages are substantial. Our Genomics product line, which is based on our strong and extensive relationships with providers, feeds our Platform; our Data and Services product line is powered by dedicated, near real-time data pipelines that we believe are increasingly difficult to replicate; and our proprietary technology has allowed us to scale where others have been unable. As we are now connected to more than 50% of all oncologists practicing in the United States in some way, and a growing number of neuropsychiatric and cardiology patients, we have reached what we believe is an inflection point for adoption. As we collect more data, our tests become more accurate, we launch more applications, which leads more physicians to join our network, thereby growing our database even further, making our tests more precise for clinicians and our database more valuable for researchers.

Our goal is to make vast amounts of healthcare information accessible and useful, allowing data to be organized and analyzed for the benefit of patients, physicians, and researchers. We envision a world where

currently siloed, inaccessible datasets are instantly available through a single, purpose-built Platform to bring generative AI to healthcare. In oncology, this means the ability to generate new insights using molecular and anatomic pathology, bioinformatics, genomic variant analysis, inherited cancer risk, computational biology, drug label data, noted adverse events, clinical trials data, research publications, investigational studies, care pathways, real world evidentiary studies, and phenotypic and morphologic data. We envision a world where all of this data is connected to every diagnostic test run, with the results contextualized and personalized so that physicians can make data-driven decisions in real time in the clinical setting.



Tempus has built the first version of our desired world—in oncology, in the United States—as our platform connects a patient's genomic and clinical data to help physicians determine the optimal therapeutic path. Our tests are designed to know who the patient is. When we have the requisite data, the tests do not recommend drugs that have already been prescribed or clinical trials for which patients are not eligible.

Our current product and service offerings represent the first step toward our singular pursuit: a world where physicians tailor their patient's treatment based on data, so that every complex case is handled in a personalized fashion, making the promise of precision medicine a reality. We endeavor to make all laboratory tests (genomic or otherwise) AI-enabled or "Intelligent" because we believe this is the fastest path to bring the promise of AI to healthcare, improving outcomes for those most in need.

To this singular pursuit we are indelibly focused.

Our Competitive Advantages

- We are both a technology company and a healthcare company, allowing us to harness the advantages of both to advance precision medicine.
- We have built a Platform that is connected to hundreds of provider networks, allowing us to amass a large repository of multimodal data that we believe is essential for bringing AI to healthcare.
- Our Intelligent Diagnostics provide significant value to our customers, which has fostered broad adoption of many of our products.
- Our business model has inherent network effects that help drive adoption and improve our data advantage with each new order placed.

- Our Platform was built to collect, structure, harmonize and analyze large amounts of multimodal data and make use of large language models deploying generative AI applications in healthcare.
- Our Platform is disease agnostic and facilitates rapid expansion into different disease categories.
- The size of our database and the breadth of our multimodal data capabilities position us well to be able to launch algorithmic diagnostics (Algos) and other AI Applications at scale.
- Many of our products and services are already widely used throughout the healthcare ecosystem.
- Our technology integration, go to market and commercial infrastructure provide a significant strategic advantage that can be leveraged to accelerate new product launches and realize efficiencies.

Our Growth Strategy

- Grow our database and the number of providers connected to our Platform.
- Drive increased adoption of our Genomics product across healthcare providers.
- Drive increased adoption of our data licensing and clinical trial matching products with pharmaceutical and biotechnology companies.
- Validate and deploy AI Applications at scale.
- Expand our capabilities and commercial traction outside of oncology, including in neuropsychology, radiology, cardiology, and other disease categories.
- Expand internationally.

Recent Developments

Series G-4 Financing

On October 11, 2023, we entered into a stock purchase agreement with certain investors, pursuant to which we issued and sold 785,245 shares of our Series G-4 preferred stock at a price per share of $57.3069, for an aggregate purchase price of approximately $45.0 million, or the Series G-4 Financing. As part of the Series G-4 Financing, we may sell up to an additional 2,704,736 shares of Series G-4 preferred stock through January 9, 2024. The terms of our Series G-4 preferred stock provide that in the event of an initial public offering of our Class A common stock, each share of Series G-4 preferred stock would be converted into a number of shares of our Class A common stock equal to (i) $57.3069 per share, plus any accrued and unpaid dividends on such share divided by (ii) the lesser of (a) $51.5762 and (b) 85% of the public offering price in this offering. Based on an assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, all of the shares of Series G-4 preferred stock will convert into an aggregate of shares of our Class A common stock in connection with this offering. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the number of shares of Class A common stock into which all shares of Series G-4 preferred stock would convert in connection with this offering by approximately shares.

In addition, we agreed to pay to each purchaser in the Series G-4 Financing an amount equal to 5% of the per share price for each share of Series G-4 preferred stock purchased by such purchaser, or the G-4 Special Payment, in the event that following this offering, the average of the last trading price on each trading day during the ten day trading period beginning on the first day of trading of our Class A common stock is less than 110% of the price per share of Class A common stock sold in this offering. If applicable, the G-4 Special Payment will be equal to approximately $2.3 million in the aggregate and will be payable in cash to the purchasers within thirty (30) days following this offering.

Amendment to Credit Agreement

On October 11, 2023, the Company signed a second amendment to its Credit Agreement with Ares Capital Corporation which provided an additional $35.0 milllion in term debt. The Company received $34.1 million in cash, which is the aggregate principal amount of $35.0 million less debt issuance costs of $0.9 million. Terms of the second amendment are consistent with existing terms of the Credit Agreement.

Risk Factors Summary

Investing in our Class A common stock involves substantial risk. The risks described in the section titled "Risk Factors" immediately following this summary may cause us to not realize the full benefits of our strengths or may cause us to be unable to successfully execute all or part of our strategy. Some of the more significant challenges include the following:

- We have incurred significant losses since inception, we may continue to incur losses in the future, and we may not be able to generate sufficient revenue to achieve and maintain profitability.
- Our current or future products may not achieve or maintain sufficient commercial market acceptance.
- Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.
- The success of our business depends on our continued access to, and ability to monetize, de-identified patient data.
- Our limited operating history and rapid growth make it difficult to evaluate our future prospects and the risks and challenges we may encounter.
- We will need to raise additional capital to fund our existing operations, develop our Platform, commercialize new products or expand our operations.
- If third-party payers, including commercial payers and government healthcare programs, do not provide coverage of, or adequate reimbursement for, or reverse or change their policies related to our tests, our business, financial condition and results of operations will be negatively affected.
- Failure of, or defects in, our Platform's AI software, or increased regulation in this space, could impair our ability to process our data, develop products, or provide test results, and harm our business, financial condition and results of operations.
- If we cannot compete successfully with our competitors, we may be unable to increase or sustain our revenue or to achieve and then sustain profitability.
- We rely on a limited number of suppliers or, in some cases, sole suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or promptly transition to alternative suppliers.
- If our existing laboratory and storage facilities become damaged or inoperable or we are required to vacate our existing facilities, our ability to perform our tests and pursue our research and development efforts may be jeopardized.
- We conduct business in a heavily regulated industry, and changes in regulations or violations of regulations may, directly or indirectly, reduce our revenue, adversely affect our business, financial condition and results of operations.
- If we are unable to obtain, maintain and enforce sufficient intellectual property protection for our Platform and products, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors or other third parties could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be impaired.

- We are highly dependent on the services of Eric Lefkofsky and other members of our senior management team and the loss of any member of our senior management team or our inability to attract and retain highly skilled scientists, clinicians, sales representatives and business development managers could adversely affect our business, financial condition and results of operations.
- We depend on information technology systems, including on premises, co-located and third-party data centers and platforms, and any interruptions of service or failures may impair and harm our business, financial condition and results of operations.
- The dual class structure of our common stock will have the effect of concentrating voting control with our Chief Executive Officer, Founder and Chairman, which will limit your ability to influence the outcome of important decisions.
- We have not elected to take advantage of the "controlled company" exemption to the corporate governance rules for publicly listed companies but may do so in the future.
- Our existing and any future debt may affect our flexibility in operating and developing our business and our ability to satisfy our obligations.

Corporate Information

We were founded by Eric Lefkofsky, originally formed under the name Bioin LLC in Delaware in August 2015 and we converted to a Delaware corporation in September 2015 under the name Bioin Inc. We changed our name to Tempus Health, Inc. later in 2015 and in 2016, we changed our name to Tempus Labs, Inc. Our principal executive offices are located at 600 West Chicago Avenue, Suite 510 Chicago, Illinois 60654, and our telephone number is (800) 976-5448. Our website address is www.tempus.com. Information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider information on our website to be part of this prospectus.

The Tempus logo, "Tempus" and our other registered and common law trade names, trademarks and service marks are the property of Tempus Labs, Inc. or our subsidiaries. Other trade names, trademarks and service marks used in this prospectus are the property of their respective owners.

Implications of Being an Emerging Growth Company

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. We may take advantage of certain exemptions from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm under Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a non-binding advisory vote on executive compensation and any golden parachute payments. We may take advantage of these exemptions for up to five years or until we are no longer an emerging growth company, whichever is earlier. We will cease to be an emerging growth company prior to the end of such five-year period if certain earlier events occur, including if we become a "large accelerated filer" as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, our annual gross revenues exceed $1.235 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period. In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation related information that would be required if we were not an emerging growth company. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock. In addition, the JOBS Act provides that an "emerging growth company" can delay adopting new or revised accounting standards until those standards apply to private companies. We have elected to use the extended transition period under the JOBS Act. Accordingly, our financial statements may not be comparable to the financial statements of public companies that comply with such new or revised accounting standards.

THE OFFERING

Class A common stock offered by us	shares
Option to purchase additional shares of Class A common stock offered by the selling stockholders to cover over-allotments, if any	shares
Class A common stock to be outstanding immediately after this offering	shares
Class B common stock to be outstanding immediately after this offering	5,374,899 shares
Total Class A common stock and Class B common stock to be outstanding immediately after this offering	shares
Use of proceeds	We estimate that our net proceeds from the sale of our Class A common stock that we are offering will be approximately $ million, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses. We will not receive any proceeds from any sale of shares of our Class A common stock by the selling stockholders. The principal purposes of this offering are to increase our capitalization and financial flexibility, create a public market for our Class A common stock and facilitate our future access to the capital markets. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. However, we currently intend to use the net proceeds we receive from this offering for general corporate purposes, including working capital, operating expenses and capital expenditures. We may also use a portion of the net proceeds to acquire complementary businesses, products, services or technologies. At this time, we do not have agreements or commitments to enter into any material acquisitions. See the section titled “Use of Proceeds” for additional information.
Voting rights	We will have two classes of common stock following this offering: Class A common stock and Class B common stock. Each share of Class A common stock is entitled to one vote and each share of Class B common stock is entitled to 30 votes and is convertible at any time into one share of Class A common stock. In addition, all shares of Class B common stock will automatically convert into shares of Class A common stock in certain circumstances,

	including on the date that Eric Lefkofsky, our Chief Executive Officer, Founder and Chairman (1) ceases to serve as an executive officer or member of our Board of Directors or (2) ceases to own, together with his controlled entities, at least 10,000,000 shares of our capital stock (as adjusted for stock splits, stock dividends, combinations, subdivisions and recapitalizations). See the section titled "Description of Capital Stock—Class A Common Stock and Class B Common Stock." Holders of Class A common stock and Class B common stock will generally vote together as a single class, unless otherwise required by law or our amended and restated certificate of incorporation that will be in effect on the closing of this offering. Our Chief Executive Officer, Founder and Chairman, Eric Lefkofsky, will beneficially own 100% of our outstanding Class B common stock and will hold approximately % of the voting power of our outstanding shares immediately following this offering. As a result, Mr. Lefkofsky will have the ability to control the outcome of matters submitted to our stockholders for approval, including the election of our directors and the approval of any change in control transaction. See the sections titled "Principal and Selling Stockholders" and "Description of Capital Stock" for additional information.
Risk factors	You should carefully read the section titled "Risk Factors" beginning on page 24 and the other information included in this prospectus for a discussion of facts that you should consider before deciding to invest in shares of our Class A common stock.
Proposed Nasdaq Global Select trading symbol	"TEM"

The number of shares of Class A common stock and Class B common stock that will be outstanding immediately after this offering as noted above is based on shares of Class A common stock and 5,374,899 shares of Class B common stock outstanding as of September 30, 2023 (after giving effect to the Series G-4 Financing and assuming the conversion of all outstanding shares of redeemable convertible preferred stock, other than our Series B redeemable convertible preferred stock and non-voting common stock into Class A common stock and all outstanding shares of Series B redeemable convertible preferred stock into Class B common stock as described below) and excludes:

- shares of Class A common stock issuable on the vesting and settlement of restricted stock units, or RSUs, and performance-vesting restricted stock units, or PSUs, outstanding as of September 30, 2023 under our Third Amended and Restated 2015 Stock Plan, as amended, or 2015 Plan, for which the performance-based vesting condition will be satisfied in connection with this offering, but for which the service-based vesting condition will not be satisfied on or before September 30, 2023;

- 10,000,000 shares of Class A common stock reserved for future issuance under our 2024 Equity Incentive Plan, or 2024 Plan, as well as any future increases, including annual automatic evergreen increases, in the number of shares of Class A common stock reserved for issuance under the 2024 Plan;
- 3,000,000 shares of Class A common stock reserved for future issuance under our 2024 Employee Stock Purchase Plan, or the ESPP, as well as any future increases, including annual automatic evergreen increases, in the number of shares of Class A common stock reserved for issuance under the ESPP;
- 210,000 shares of Class A common stock issuable on the exercise of a stock option outstanding as of September 30, 2023 under the 2015 Plan, with an exercise price of $0.8542 per share;
- shares of Class A common stock issuable upon conversion of the promissory note we issued to Google LLC, as amended, which note is convertible beginning in March 2026 into a number of shares determined by dividing (i) the then outstanding principal amount of such note (which was $ as of September 30, 2023) plus accrued and unpaid interest by (ii) the average of the last trading price of the Company's Class A common stock on each trading day during the twenty day period ending immediately prior to March 22, 2026, as more fully described in the section of this prospectus titled "Description of Capital Stock—Convertible Promissory Note";
- shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, issuable upon the exercise of the warrant issued to AstraZeneca AB with an exercise price equal to the initial public offering price, as more fully described in the section of this prospectus titled "Business—Operations—Our Strategic Collaboration with AstraZeneca";
- up to $ million in shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, issuable to one of our stockholders pursuant to a contingent payment right, which payment may be made in cash or shares of Class A common stock, upon mutual agreement of the Company and such stockholder; and
- the expected issuance on or around March 11, 2024 of 8,724 shares of Class A common stock to former stockholders of Mpirik, Inc., or Mpirik, in connection with our purchase of all of the outstanding shares of Mpirik. See Notes 3 and 12 to our consolidated financial statements included elsewhere in this prospectus.

In addition, unless we specifically state otherwise, the information in this prospectus (except for the historical financial statements and the related discussion of such financial information) assumes:

- the filing of our amended and restated certificate of incorporation and the effectiveness of our amended and restated bylaws, each of which will occur upon the closing of this offering;
- the conversion on a one-for one basis of all outstanding shares of our Series B redeemable convertible preferred stock into an aggregate of 5,374,899 shares of Class B common stock, which will occur upon the closing of this offering;
- the conversion of all outstanding shares of redeemable convertible preferred stock, other than our Series B redeemable convertible preferred stock, into an aggregate of shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, which will occur upon the closing of this offering;
- the issuance of additional shares of Class A common stock, which we refer to as the Additional Class A Conversion Shares, upon the conversion of all outstanding shares of our redeemable convertible preferred stock upon the closing of this offering, pursuant to provisions of our certificate of incorporation as currently in effect, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus;

- the issuance of shares of Class A common stock upon the settlement of RSUs and PSUs outstanding as of September 30, 2023 under our 2015 Plan for which the performance-based vesting condition will be satisfied in connection with this offering and for which any service-based vesting condition was satisfied on or before September 30, 2023, which settlement will be effected upon the expiration of the lock-up period in connection with this offering;
- the conversion of all outstanding shares of our nonvoting common stock into 4,917,823 shares of Class A common stock, which will occur upon the closing of this offering;
- no exercise of the underwriters' option to purchase up to additional shares of Class A common stock from the selling stockholders in this offering to cover over-allotments, if any; and
- no exercise of options or settlement of outstanding RSUs and PSUs except as described above.

Additional Class A Conversion Shares

Upon any conversion of our redeemable convertible preferred stock into common stock, including in connection with the closing of this offering, we are obligated to pay declared or accrued dividends on shares of our redeemable convertible preferred stock, at our option, in cash or in shares of common stock. As of the date of this prospectus, shares of redeemable convertible preferred stock have accrued approximately $ million in unpaid dividends, which we expect to pay in shares of our Class A common stock. As a result, at the closing of this offering, we expect to issue the Additional Class A Conversion Shares to holders of shares of our redeemable convertible preferred stock. The number of Additional Class A Conversion Shares to be issued depends on the initial public offering price of our Class A common stock. Based on an assumed initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, we will issue Additional Class A Conversion Shares immediately prior to the closing of this offering. For illustrative purposes only, the table below shows the number of Additional Class A Conversion Shares that would be issuable at various initial public offering prices, as well as the total number shares of our Class A common stock that would be outstanding after this offering as a result:

Assumed Initial Public Offering Price ($)	Additional Class A Conversion Shares	Estimated Total Shares of Class A Common Stock Outstanding After this Offering

SUMMARY CONSOLIDATED FINANCIAL DATA

The summary consolidated statement of operations data for the years ended December 31, 2021 and 2022 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. The summary consolidated statement of operations data for the nine months ended September 30, 2022 and 2023 and the summary consolidated balance sheet data as of September 30, 2023 have been derived from our unaudited interim consolidated financial statements included elsewhere in this prospectus. The unaudited consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements, and in the opinion of management, reflect all adjustments, which include only normal recurring adjustments necessary to present fairly our financial position and results of operations. You should read the consolidated financial data set forth below in conjunction with our consolidated financial statements and the accompanying notes and the information in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained elsewhere in this prospectus. Our historical and interim results are not necessarily indicative of the results to be expected for the full year or any other period in the future.

	Year Ended December 31,		Nine Months Ended September 30,	
	2020	2021	2022	2023
			(unaudited)	
Net revenue				
Genomics	$ 195,012	$ 197,984	$ 140,055	$ 270,797
Data and services	62,841	122,684	79,987	113,301
Total net revenue	$ 257,853	$ 320,668	$ 220,042	$ 384,098
Cost and operating expenses				
Cost of revenues, genomics	162,276	150,255	108,752	138,781
Cost of revenues, data and services	11,933	40,227	29,503	40,690
Technology research and development	67,190	79,093	58,258	70,485
Research and development	61,161	83,158	61,552	66,268
Selling, general and administrative	199,004	233,377	168,804	211,662
Total cost and operating expenses	501,564	586,110	426,869	527,886
Loss from operations	$ (243,711)	$ (265,442)	$ (206,827)	$ (143,788)
Interest income	623	3,032	889	5,864
Interest expense	(15,184)	(21,894)	(12,671)	(33,245)
Other (expense) income, net	(316)	(4,846)	(4,453)	7,909
Loss before provision for income taxes	$ (258,588)	$ (289,150)	$ (223,062)	$ (163,260)
Provision for income taxes	—	(66)	—	(74)
Losses from equity method investments	(604)	(595)	(464)	(301)
Net Loss	$ (259,192)	$ (289,811)	$ (223,526)	$ (163,635)
Accretion of convertible preferred stock to redemption value	(106)	(301)	(301)	—
Dividends on Series A, B, B-1, B-2, C, D, E, F, G and G-3 preferred shares	(35,758)	(40,975)	(30,415)	(32,709)
Cumulative Undeclared Dividends on Series C preferred shares	(2,680)	(2,841)	(2,125)	(2,230)
Net loss attributable to common shareholders, basic and diluted	(297,736)	(333,928)	(256,367)	(198,574)

	Year Ended December 31,		Nine Months Ended September 30,	
	2020	2021	2022	2023
			(unaudited)	
Net loss per share attributable to common shareholders, basic and diluted	$ (4.73)	$ (5.30)	$ (4.07)	$ (3.14)
Weighted-average shares outstanding used to compute net loss per share, basic and diluted[1]	62,975	63,032	62,980	63,267
Pro forma net loss per share attributable to common stockholders, basic and diluted[2]	$	$	$	$
Weighted-average shares outstanding used to compute pro forma net loss per share, basic and diluted[2]				

(1) See Notes 2 and 12 to our consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net loss per share attributable to common stockholders.

(2) Pro forma net loss per share gives effect to (a) the Series G-4 Financing, (b) the automatic conversion of all of our outstanding shares of Series B redeemable convertible preferred stock into 5,374,899 shares of Class B common stock, which will occur upon the closing of this offering, (c) the automatic conversion of all of our outstanding shares of redeemable convertible preferred stock, other than our Series B preferred stock, into shares of Class A common stock, which will occur upon the closing of this offering, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, (d) the issuance of Additional Class A Conversion Shares, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, which will occur upon the conversion of all outstanding shares of our redeemable convertible preferred stock and upon the closing of this offering, (e) the automatic conversion of all of our nonvoting common stock into 4,917,823 shares of Class A common stock, which will occur upon the closing of this offering, (f) the issuance of 13,388,209 shares of Class A common stock upon settlement of RSUs and PSUs for which the service-based vesting condition was satisfied on or before September 30, 2023 and for which the performance-based vesting condition will be satisfied in connection with this offering, which settlement will occur upon the expiration of the lock-up period in connection with this offering, (g) stock-based compensation expense of approximately $545.4 million related to the vesting of RSUs and PSUs for which the service-based vesting condition was satisfied on or before September 30, 2023 and for which the performance-based vesting condition will be satisfied in connection with this offering, as further described in Note 10 to our consolidated financial statements included elsewhere in this prospectus, and (h) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur upon the closing of this offering. See “Prospectus Summary—The Offering” for a description of the Additional Class A Conversion Shares, as the number of Additional Class A Conversion Shares that will be issued depends on the initial public offering price of our Class A common stock.

	September 30, 2023		
	Actual	Pro Forma[1]	Pro Forma As Adjusted[2][3]
		(in thousands)	
Consolidated Balance Sheet Data:			
Cash, cash equivalents and restricted cash	$ 133,528	$	$
Total assets	504,071		
Working capital[4]	96,823		
Redeemable convertible preferred stock	1,051,637		
Total stockholders’ (deficit) equity	(1,324,697)		

(1) The pro forma consolidated balance sheet data gives effect to (a) the Series G-4 Financing, (b) the automatic conversion of all of our outstanding shares of Series B redeemable convertible preferred stock into 5,374,899 shares of Class B common stock, which will occur upon the closing of this offering, (c) the automatic conversion

of all of our outstanding shares of redeemable convertible preferred stock, other than our Series B preferred stock, into shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, which will occur upon the closing of this offering, (d) the issuance of the Additional Class A Conversion Shares, which will occur upon the conversion of all outstanding shares of our redeemable convertible preferred stock and upon the closing of this offering, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, (e) the automatic conversion of all of our nonvoting common stock into 4,917,823 shares of Class A common stock, which will occur upon the closing of this offering, (f) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur upon the closing of this offering, (g) the issuance of 13,388,209 shares of Class A common stock upon settlement of RSUs and PSUs for which the service-based vesting condition was satisfied on or before September 30, 2023 and for which the performance-based vesting condition will be satisfied in connection with this offering, which settlement will occur upon the expiration of the lock-up period in connection with this offering, and (h) stock-based compensation expense of approximately $545.4 million related to the vesting of RSUs and PSUs for which the service-based vesting condition was satisfied on or before September 30, 2023 and for which the performance-based vesting condition will be satisfied in connection with this offering, as further described in Note 10 to our consolidated financial statements included elsewhere in this prospectus. See "Prospectus Summary—The Offering" for a description of the Additional Class A Conversion Shares, as the number of Additional Class A Conversion Shares that will be issued depends on the initial public offering price of our Class A common stock.

(2) The pro forma as adjusted consolidated balance sheet data reflects (a) the pro forma adjustments set forth in footnote (1) above and (b) our receipt of $ million in net proceeds from the sale of shares of Class A common stock that we are offering at an assumed initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(3) Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share of Class A common stock, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) each of our pro forma as adjusted cash, cash equivalents and restricted cash, total assets, working capital and total stockholders' (deficit) equity by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of Class A common stock offered by us would increase (decrease) each of our pro forma as adjusted cash, cash equivalents and restricted cash, total assets, working capital and total stockholders' (deficit) equity by $ million, assuming the assumed initial public offering price of $ per share of Class A common stock remains the same, and after deducting the estimated underwriting discounts and commissions.

(4) Working capital is defined as current assets less current liabilities.

RISK FACTORS

Investing in our Class A common stock involves a high degree of risk. You should consider and carefully read all of the risks and uncertainties described below, as well as other information included in this prospectus, including our consolidated financial statements and related notes appearing elsewhere in this prospectus, before making an investment decision. The risks described below are not the only ones we face. The occurrence of any of the following risks or additional risks and uncertainties not presently known to us or that we currently believe to be immaterial could materially and adversely affect our business, financial condition, or results of operations. In such case, the trading price of our Class A common stock could decline, and you may lose some or all of your original investment.

Risks Related to Our Business and Strategy

We have incurred significant losses since inception, we may continue to incur losses in the future, and we may not be able to generate sufficient revenue to achieve and maintain profitability.

We have incurred significant losses since our inception. For the years ended December 31, 2021 and 2022 and the nine months ended September 30, 2022 and 2023, we incurred net losses of $259.2 million, $289.8 million, $223.5 million and $163.6 million, respectively. As of September 30, 2023, we had an accumulated deficit of $1.3 billion. To date, we have financed our operations principally from the sale of stock and convertible securities, and revenue from our Genomics and Data businesses. We have devoted substantially all of our resources to the development and commercialization of our Platform and current products and to research and development activities related to Platform development and future products, including regulatory initiatives to obtain marketing approval for our diagnostic tests, and sales and marketing activities for our Genomics and Data businesses. We will need to generate substantial revenue to achieve and then sustain profitability, and even if we achieve profitability, we cannot be sure that we will remain profitable for any period of time.

Our current or future products may not achieve or maintain sufficient commercial market acceptance.

We believe our commercial success is dependent upon our ability to continue to successfully market and sell our current Genomic diagnostics products to continue to grow our Data business by expanding our current relationships and developing new relationships with clinicians and pharmaceutical and biotechnology customers, and to develop and commercialize new products based on our Platform, including by expanding our Genomics product line to new disease areas and by advancing our existing and future AI Applications. Our ability to achieve and maintain sufficient commercial market acceptance of our existing and future products will depend on a number of factors, including:

- our ability to increase awareness of our Genomics and AI Applications diagnostic tests and other AI Applications, including new product offerings as they become available;
- the rate of adoption and/or endorsement of our Genomics and AI Applications diagnostic tests and AI Applications by clinicians, pharmaceutical and biotechnology companies, KOLs, and advocacy groups;
- the timing and scope of obtaining any necessary approvals by regulatory agencies, including the FDA, for our diagnostic tests, any software offerings, AI Applications, or any features of our Platform, in each case, that may be subject to regulatory oversight;
- our ability to obtain positive coverage decisions for our tests from additional commercial payers and to broaden the scope of indications included in such coverage decisions;
- our ability to obtain reimbursement and expanded coverage from government payers, including Medicare;
- our ability to increase demand for our Data business, including by expanding our database of de-identified patient information and increasing the utility of our product offerings;
- our ability to successfully expand beyond oncology into neuropsychology, cardiology, radiology, and other indications;

- our ability to build and maintain robust data sets with respect to patient populations in geographic regions that we may seek to enter in the future;
- the impact of our investments in Platform development, product innovation and commercial growth;
- public perception of our products, those of our competitors and the industry in which we operate, including our ability to avoid adverse publicity from defects or errors; and
- our ability to further validate our Platform through clinical research and accompanying publications.

We cannot assure that we will be successful in addressing each of these criteria or other criteria that might affect the market acceptance of our products. If we are unsuccessful in achieving and maintaining sufficient market acceptance of our products, our business, financial condition and results of operations will suffer.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.

Our quarterly and annual operating results may fluctuate significantly, which makes it difficult for us to predict our future operating results. Because we plan to operate our business with a long-term focus, these fluctuations may be more pronounced than those experienced by other companies that operate with a shorter-term focus. These fluctuations may occur due to a variety of factors, many of which are outside of our control, including, but not limited to:

- the timing and cost of, and level of investment in, research, development, regulatory approval and commercialization activities relating to our Platform and products, which may change from time to time;
- the volume and customer mix of our Genomics and AI Applications diagnostic testing, AI Applications, and other products;
- the start and completion of projects in which our Data and Services products are utilized;
- the introduction of new products or product enhancements by us or others in our industry;
- coverage and reimbursement policies with respect to our products and products that compete with our products;
- expenditures that we may incur to acquire, develop or commercialize additional products and technologies;
- changes in governmental regulations, including with respect to privacy and data security and medical device regulation, and our compliance therewith, or in the status of our regulatory approvals or applications;
- future accounting pronouncements or changes in our accounting policies;
- developments or disruptions in the business and operations of our clinical, commercial and other partners;
- the impact of natural disasters, political and economic instability, including wars (such as the armed conflicts between Russia and Ukraine and Israel and Hamas), terrorism, and political unrest, epidemics or pandemics, boycotts, curtailment of trade and other business restrictions; and
- general market conditions, including high and rising inflation rates, high interest rates, government bank closures, liquidity concerns at other financial institutions, and other factors, including factors unrelated to our operating performance or the operating performance of our competitors.

Additionally, it is difficult to predict the amounts, if any, we will be able to collect for our diagnostic tests from commercial payers. We are a participating network provider in a small number of commercial payers from whom we receive reimbursement for our diagnostic tests. Payers determine the amount they are willing to

reimburse us for tests. We have provided testing to patients with many disease types and indications, most of the time as a non-participating provider. Even when payers have paid a claim, they may elect at any time to review previously paid claims for overpayment against these claims. While we have not experienced significant retroactive adjustments to date, in the event of an overpayment determination, the payer may offset the amount they determine they overpaid against amounts they owe us on current claims. We have limited leverage to dispute these retroactive adjustments and we cannot predict when, or how often, a payer might engage in these reviews. A significant amount of these offsets by one or more payers in any given quarter could have a material effect on our results of operations and cause them to fall below expectations or guidance we may provide. Due to the inherent variability and unpredictability of the reimbursement landscape, including related to the amount that payers reimburse us for any of our tests, previously recorded revenue adjustments are not indicative of future revenue adjustments from actual cash collections, which may fluctuate significantly.

In addition, the demand for our Genomics and Data and Services products will depend in part upon the research and development and clinical budgets of pharmaceutical and biotechnology customers, which are impacted by factors beyond our control, such as:

- changes in government programs (such as the National Institutes of Health) that provide funding to research institutions and companies;
- macroeconomic conditions (including any impact of unforeseen events such as the armed conflicts between Russia and Ukraine and Israel and Hamas), the political climate and the impact of public health emergencies such as the COVID-19 pandemic, high and rising inflation rates, high interest rates, government closures of banks and liquidity concerns at other financial institutions;
- changes in the regulatory environment;
- differences in budgetary cycles;
- competitor products or pricing;
- market-driven pressures to consolidate operations and reduce costs; and
- market acceptance of relatively new products.

Our operating results may fluctuate significantly due to reductions and delays in research and development or clinical expenditures by these customers. Further, many of our data licensing agreements allow us to deliver data to our customers over a period of time, which can span a year or longer. Revenue pursuant to our data licensing agreements is recognized upon delivery of the data to the customer, upon completion of performance obligations for related services, or ratably over time in the case of subscriptions. The actual timing of data deliveries can be based on a variety of factors, including, but not limited to, the customer's requirements and/or our technological, operational, and human capital capacity.

The cumulative effects of the factors discussed above could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance.

This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any guidance we may provide, or if the guidance we provide is below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated guidance we may provide.

The success of our business depends on our continued access to, and ability to monetize, de-identified patient data.

Our business relies on our ability to obtain, process, monetize and distribute highly regulated data in the healthcare industry, in a manner that complies with applicable laws, regulations and contractual and

technological restrictions. The data that we collect through the provision of Genomics tests and through other sources is critical to our ability to offer our Data and AI Applications products and services. Our Platform also includes proprietary software and dedicated data pipelines that create a network of healthcare institutions that supply us with complex multimodal data. Further, we rely on certain collaborations and licensing agreements to access important data. The success of our business depends on our continued access to, and ability to monetize, this internal and external de-identified patient data. As we seek to expand our business into additional disease areas and geographies, we will also need to be successful in building and maintaining sufficiently large relevant data sets and obtaining the permissions necessary to de-identify and use that data for commercial purposes.

Our ability to maintain, expand and monetize our datasets are subject to a number of factors, many of which are outside of our control. With respect to data included in our Data and AI Applications products, we rely on a combination of the statutory rights available to us as a HIPAA covered entity and as a HIPAA business associate. As a HIPAA covered entity, we utilize data generated through our provision of Genomic tests. As a HIPAA business associate, we may rely on healthcare providers to obtain the requisite consents from their patients, with whom we may have no direct contact, to use the de-identified data that we generate in the provision of our other offerings to the providers, or that we generate from the protected health information, or PHI, we obtain from providers. More broadly, the failure by us or our data suppliers and processors to obtain patient data in a compliant manner could have a harmful effect on our ability to use and disclose data which in turn could impair our functions and operations, including our ability to share data with third parties or incorporate it into our products. In addition, the use, processing and distribution of patient data may require us or our data suppliers and processors to obtain consent from third parties or follow additional laws, regulations or contractual and technological restrictions that apply to the healthcare industry. These requirements could interfere with our ability to deploy our products, prevent creation of new products, or otherwise limit data-driven activities that benefit us. Moreover, due to lack of valid notice, sufficient consents or waiver, we may be subject to claims or liability for use or disclosure of data or other information.

We are also dependent on the healthcare institutions within our network continuing to provide us with broad access to data to multimodal data to support the robustness of our Genomics tests and other offerings, as well as on maintaining our collaborations with ASCO, QCCA, NCCA, and similar organizations, and entering into similar collaborations with other organizations in the future, particularly as we attempt to expand into other disease areas. These third parties may have interests that diverge from our interests, including a desire to monetize their data in different ways, and there can be no assurance that we will be successful in maintaining and growing our datasets. Further, our arrangements with some of these third parties are not exclusive, which could allow such parties to provide data to our competitors, thereby adversely impacting our ability to offer differentiated products and services. Our practice of making available to providers the raw data from our Genomics testing along with corresponding clinical data we may have structured as part of providing testing also may allow those providers to use data in ways that may be harmful to our business interests.

The use, processing and distribution of patient data is also the subject of complex, interconnected and frequently changing laws and regulations in the United States and globally. We have policies and procedures in place to address the proper handling and use of data, but could face claims that our practices are insufficient, or occur in a manner not permitted under applicable laws or our agreements with or obligations to data providers, patients or other third parties. These claims or liabilities and other failures to comply with applicable requirements could subject us to unexpected costs and adversely affect our business, financial condition and results of operations. Further, any actual or perceived failure to comply with applicable privacy and data security laws could have an adverse impact on the willingness of the third parties on whom we rely for access to data to continue to provide us with such data.

The continued adoption of our products and services is dependent on a number of factors, many of which are interrelated.

Our ability to execute our growth strategy and become profitable is highly dependent on a number of factors, many of which are interrelated.

Continued adoption and use of our Genomics product line will depend on several factors, including the prices we charge for our tests, the scope of coverage and amount of reimbursement available from third-party payers for our tests, the availability of clinical data that support the value of our tests and the inclusion of our tests in industry treatment guidelines. In addition, many clinicians, hospital systems and pharmaceutical companies have existing relationships with companies that develop molecular diagnostic tests, including our competitors, and may continue to use their tests instead of ours. Despite our business development efforts, it could be difficult, expensive and/or time-consuming for healthcare providers to switch diagnostic tests for their patients, and our tests may not be widely accepted by physicians, if at all, which could in turn hinder the growth of sales of our tests. If we are unable to achieve commercial success for our tests, our business, financial condition and results of operations would be materially and adversely affected. We are also particularly dependent on our oncology tests, which accounted for 32% and 46% of our revenue in the years ended December 31, 2021 and 2022, respectively. We cannot assure that our oncology tests will continue to maintain or gain market acceptance, and any failure to do so would materially harm our business, financial condition and results of operations.

Continued adoption of and use of our Data and Services products will depend, in part, on our ability to maintain relationships and to enter into new relationships with pharmaceutical and biotechnology customers and provide relevant data to such customers for outcomes research, companion diagnostic development, novel target discovery and validation, among other uses. This can be difficult due to many factors, including the type of data required and our ability to deliver it to our pharmaceutical and biotechnology customers' satisfaction. Our pharmaceutical and biotechnology customers may decide to decrease or discontinue their use of our Insights product due to changes in their research and product development plans, failures in their clinical trials, financial constraints, or other circumstances outside of our control. Furthermore, pharmaceutical and biotechnology companies may decline to do business with us or decrease or discontinue their use of our data due to a strategic collaboration with any of our competitors. We invest resources in seeking to develop relationships with pharmaceutical and biotechnology companies regarding potential commercial opportunities on an ongoing basis. There can be no assurance that any of this investment will result in a commercial agreement, that the resulting relationship will be successful, or that the data we provide as part of the engagement will produce successful outcomes. If we cannot maintain our current relationships, or enter into new relationships, with pharmaceutical and biotechnology companies, our product development could be delayed and revenue and results of operations could be adversely affected.

The scope and robustness of the Data and Services and AI Applications products that we can offer our customers also depend significantly on the continued success of our Genomics product line, as the data that we collect through genomic testing is an essential component of our Data and Services and AI Applications products. Further, we believe that growth in the use of our Data and Services products will help drive awareness and adoption of our Genomics product line, which in turn will drive further growth within our Data and Services and AI Applications product lines. However, there can be no assurance that we will realize these synergies.

Our limited operating history and rapid growth make it difficult to evaluate our future prospects and the risks and challenges we may encounter.

We were founded in 2015 and have experienced rapid growth in revenue, adoption of our products and services, testing volume, size of our datasets, clinical trial matches and other metrics that we believe are important to assessing our business. In addition, we operate in highly competitive markets characterized by rapid technological advances and our business has evolved, and we expect it to continue to evolve, over time to remain competitive. Our limited operating history, evolving business, rapid growth and ambitious goals make it difficult to evaluate our future prospects and the risks and challenges we may encounter, and may increase the risk that we will not continue to grow at or near historical rates. Further, these factors may make it difficult for us to achieve our stated milestones and goals, and to accurately project the future performance of our business. For example, we may never realize the potential benefits of our technology as contemplated elsewhere in this prospectus, including the section titled "Prospectus Summary—Long-Term Vision."

If we fail to address the risks and difficulties that we face, including those described elsewhere in this "Risk Factors" section, our business, financial condition and results of operations could be adversely affected. We have

encountered in the past, and will encounter in the future, risks and uncertainties frequently experienced by growing companies with limited operating histories in rapidly changing industries. If our assumptions regarding these risks and uncertainties, which we use to plan and operate our business, are incorrect or change, or if we do not address these risks successfully, our results of operations could differ materially from our expectations and our business, financial condition and results of operations could be adversely affected.

We will need to raise additional capital to fund our existing operations, develop our Platform, commercialize new products or expand our operations.

We will need to raise additional capital in the future to expand our business, meet existing obligations, pursue acquisitions or strategic investments, or take advantage of financing opportunities or for other reasons, including to:

- increase our sales and marketing efforts to drive market adoption of our current products and services, and address competitive developments;
- fund development and marketing efforts of our products under development or any other future products we may develop;
- acquire, license or invest in technologies;
- acquire or invest in complementary businesses or assets; and
- finance capital expenditures and general and administrative expenses.

Our present and future funding requirements will depend on many factors, including:

- our ability to achieve revenue growth and favorable gross profits;
- our rate of progress in establishing payer coverage and reimbursement arrangements with domestic and international commercial payers and government payers;
- the cost of expanding our laboratory operations and product offerings, including our sales and marketing efforts;
- our rate of progress in, and costs of our sales and marketing activities associated with, establishing adoption of and reimbursement for our current products, including our diagnostic tests and our data analytics products;
- the rate at which we choose to advance, rate of progress in, and costs of our research and development activities associated with, products in development;
- the effect of competing technological and market developments;
- costs related to our international expansion; and
- the potential costs of and delays in product development as a result of any existing or new regulatory oversight applicable to our products.

We have no committed sources of capital. We may seek to sell equity or convertible securities, enter into a credit facility or another form of third-party funding, or seek other debt financing. The various ways we could raise additional capital carry potential risks. If we raise funds by issuing equity or convertible securities, dilution to our stockholders could result. Any preferred equity securities issued also could provide for rights, preferences or privileges senior to those of holders of our common stock. If we raise funds by issuing debt securities, those debt securities would have rights, preferences and privileges senior to those of holders of our common stock. The terms of debt securities issued or borrowings pursuant to a credit agreement could impose significant restrictions on our operations. If we raise funds through collaborations and licensing arrangements, we might be required to relinquish significant rights to our Platform or products or grant licenses on terms that are not favorable to us. These alternatives of raising additional capital may not be available to us on acceptable or commercially reasonable terms, if at all, or in amounts sufficient to meet our needs. The failure to obtain any required future financing may require us to reduce or eliminate certain existing operations and could contribute to negative market perceptions about us or our securities.

Our AI Applications product line is nascent.

As of September 30, 2023, we had limited commercialized algorithms within our AI Applications product line. Revenue generated from AI Applications is reported within our Data and Services product line and was less than $1.0 million for the year ended December 31, 2021, $1.4 million for the year ended December 31, 2022, and $1.0 million and less than $1.0 million for the nine months ended September 30, 2022 and 2023, respectively, which represents less than 1.0% of our total revenue in each period. We have a number of additional Algos in development and we may not be successful in developing and commercializing these or future Algos, or in attaining our other development targets. Further, the scope and robustness of the AI Applications that we can offer our customers depend significantly on the continued success of our Genomics product line and access to third-party data, of which there can be no assurance. We also cannot accurately estimate how our future AI Applications will be priced, whether reimbursement can be obtained or whether we will generate any revenue from such AI Applications. Further, the use of diagnostics that are entirely algorithmic in nature is novel and today represent only a small proportion of the diagnostics market. The use of algorithmic diagnostics may also be subject to existing and entirely new regulations that may substantially impact their adoption, use, reimbursement and ongoing viability. While we believe AI Applications represent a significant long-term opportunity for us, there can be no assurances that a robust and sustained market for such diagnostics will develop or that we will successfully compete in any such market.

New product development and commercialization involve a lengthy and complex process and we may be unable to develop or commercialize new products on a timely basis, or at all.

Products that are under development have taken time and considerable resources to develop, and we may not be able to complete the development and commercialization of such products on a timely basis, or at all.

Before we can commercialize any new Genomics or AI Applications diagnostic products, we will need to expend significant funds in order to:

- conduct substantial research and development, including validation studies and, in some cases, clinical trials;
- further develop and scale our laboratory or algorithmic processes to accommodate diagnostic tests in additional disease areas; and
- further develop and scale our infrastructure to be able to analyze increasingly large amounts of data.

Our diagnostic product development process involves a high degree of risk, and product development efforts may fail for many reasons, including:

- failure of the diagnostic product to perform as expected, including defects and errors;
- lack of validation data or validation activities that subsequently may be challenged or questioned; or
- failure to demonstrate the clinical utility of the diagnostic test.

Expanding the offerings of our Data business is also a speculative and risky endeavor and may require us to:

- acquire additional access to patient healthcare information that is relevant to the products we offer;
- correctly identify customer needs and preferences and predict future needs and preferences;
- allocate our research and development funding to areas with higher growth prospects; and
- anticipate and respond to our competitors' development of new products and technological innovations.

Our Platform development plan involves using data and analytical insights generated from our current products to foster research and development in our future products. However, if we are unable to generate additional or compatible data and insights, then we may not be able to advance our products under development as quickly, or at all, or without significant additional investment.

As we develop our products, we have made and will have to make significant investments in Platform development, marketing and selling resources, which could adversely affect our future cash flows. We may also rely on third parties to develop new products that we may license and include in our overall offering, particularly with respect to our AI Applications business, and we may exert limited or no control over such development efforts.

In addition, in our development and commercialization plans for our business lines, we may forego other opportunities that may provide greater revenue or be more profitable. For example, while we expect to provide diagnostic and data technologies to pharmaceutical and biotechnology companies (including companies in which our Chief Executive Officer, Founder, and Chairman, Eric Lefkofsky, or our other executive officers, directors or significant stockholders may have significant or controlling voting and economic interests) developing therapeutics for various diseases, including cancers, we do not currently expect to conduct development of therapeutics ourselves. As a result, even if our development efforts result in commercially viable products, our business and results of operations could underperform in comparison to our customers and competitors.

We may not be successful in updating or otherwise enhancing our Platform and products.

As of September 30, 2023, we had developed multiple genomics diagnostics tests across oncology, infectious diseases, and neuropsychology, as well as algorithmic diagnostic tests across oncology and cardiology. A major part of our strategy is bringing new high-value enhancements to our customers through updates to our Platform and existing products, which may include expanding our existing products with additional features, applications and data modalities. We expect to make significant investments to advance these efforts.

Enhancing our Platform and products is a speculative and risky endeavor. Features, applications and data modalities that initially show promise may fail to achieve the desired results or may not achieve acceptable levels of analytical accuracy or utility. We may need to alter our products in development and repeat studies before we identify a potentially successful update. Product development is expensive, may take years to complete and can have uncertain outcomes. Failure can occur at any stage of the development. Even if we confirm that our products can be successfully updated for additional features, applications and data modalities, those features, applications and data modalities may be limited in scope to only some diseases, disease segments, patient markets or geographies. If, after development, an updated product appears successful, we may, depending on the nature of the update, need to obtain FDA's, EMA's and other regulatory bodies' clearances, authorizations or approvals before we can market the updated product. The FDA's and EMA's clearance, authorization or approval pathways are likely to require significant time and expenditures. The FDA, EMA or other applicable regulatory authority may not clear, authorize or approve any product update we develop and may even change the applicable regulations or the application of those regulations in ways that would impact our existing products or services, including our Platform. Even if we develop a product update that receives regulatory clearance, authorization or approval, we or our collaborators would need to commit substantial resources to commercialize, sell and market the updated product, which may never achieve significant market acceptance among various stakeholders and be commercially successful.

In addition, we generally sell our products in industries that are characterized by rapid technological changes, frequent new product introductions and changing industry standards. If we do not develop Platform and product enhancements based on technological innovation on a timely basis, our Platform and products may become obsolete over time and our financial and competitive position will suffer. Our success will depend on several factors, including our ability to:

- correctly identify customer needs and preferences and predict future needs and preferences;
- allocate our research and development funding to areas with higher growth prospects;
- anticipate and respond to our competitors' development of new products and technological innovations;

- innovate and develop new technologies and applications, and acquire or obtain rights to third-party technologies that may have valuable applications in the markets we serve;
- successfully develop and commercialize new technologies and applications in a timely manner; and
- convince customers to adopt new technologies and applications.

The expenses or losses associated with unsuccessful expansion of our Platform could adversely affect our business, financial condition and results of operations.

If we are not successful in leveraging our Platform to identify, develop and commercialize additional genomic and algorithmic tests, our ability to expand our business and achieve our strategic objectives would be impaired.

A key element of our strategy is to leverage our Platform to identify, develop and potentially commercialize genomic and algorithmic tests beyond our current portfolio to diagnose various types of diseases. Identifying new genomic and algorithmic tests requires substantial technical, financial and human resources, whether or not any genomic or algorithmic tests are ultimately developed and commercialized. We may pursue what we believe is a promising opportunity to leverage our Platform only to discover that certain of our risk or resource allocation decisions were incorrect or insufficient, or that individual genomic or algorithmic tests have limitations that were previously unknown or underappreciated.

Our strategy of pursuing the value of our Platform to develop genomic and algorithmic tests over a long time horizon and across a broad array of human diseases may not be effective. In the event that material decisions in any of these areas turn out to be incorrect or sub-optimal, we may experience a material adverse impact on our business and ability to fund our operations, and we may never realize what we believe is the potential of our Platform for developing and commercializing genomic and algorithmic tests.

If our existing and new products fail to achieve and sustain sufficient scientific acceptance, we will not generate expected revenue and our prospects may be harmed.

The life sciences scientific community is comprised of a small number of early adopters and key opinion leaders who significantly influence the rest of the community. The success of life sciences products is due, in large part, to acceptance by the scientific community and their adoption of certain products as best practice in the applicable field of research. The current system of academic and scientific research views publishing in a peer-reviewed journal as a measure of success. In such journal publications, the researchers will describe not only their discoveries but also the methods and typically the products used to fuel such discoveries. Mentions in peer-reviewed journal publications is a good barometer for the general acceptance of our products as best practices. Ensuring that early adopters and key opinion leaders publish research involving the use of our products is critical to ensuring our products gain widespread acceptance and market growth. Continuing to maintain good relationships with such key opinion leaders is vital to growing our market. The number of times our products were mentioned in peer-reviewed publications has increased significantly in recent years. As of December 31, 2022, our products have been mentioned in 59 peer-reviewed articles published in major journals, including 40 that were Tempus-authored. We cannot assure investors, however, that our products will continue to be mentioned in peer-reviewed articles with any frequency or that any new products that we introduce in the future will be mentioned in peer-reviewed articles. In addition, self-authored journal publications that mention our products may present an actual, potential or perceived conflict of interest and, therefore, the number of publications in which our products are mentioned may not be indicative of the level of acceptance of our products. If too few researchers describe the use of our products, too many researchers shift to a competing product and publish research outlining their use of that product or too many researchers negatively describe the use or usability of our products in publications, it may drive existing and potential customers away from our products, which could harm our operating results. Any decrease in the frequency at which our products are mentioned in peer reviewed journals, or a decline in the quality of such publications, may negatively impact our prospects.

Our diagnostic products, or our competitors' diagnostic products, could have defects or errors or otherwise fail to meet the expectations of patients, physicians and third-party payers; in such cases our operating results, reputation and business could suffer.

The success of our Genomics and AI Applications products depends in part on patients', physicians' and third-party payers' confidence that our Platform can provide reliable, high-quality intelligent diagnostics that will improve clinical outcomes and lower healthcare costs, as well as our ability to comply with applicable privacy and data security requirements. We believe that patients, physicians and third-party payers are likely to be particularly sensitive to our use of data, as well as product defects and errors in the use of our products, including if our products fail to detect genomic alterations or other clinical relevant information with high accuracy from samples, if we fail to list or inaccurately include certain treatment options and available clinical trials in our test reports, or if we fail to comply with applicable privacy and data security laws, and there can be no guarantee that we will be successful in this regard. Furthermore, if our competitors' diagnostic products do not perform to expectations or if they fail to comply with applicable laws and regulations, it may result in lower confidence in us as well. As a result, the failure of our diagnostic products or our competitors' diagnostic products to perform as expected, or failure by us or our competitors to comply with applicable laws and regulations, could significantly impair our operating results and our reputation. In addition, we may be subject to legal claims arising from any such failures, including claims that defects or errors in our diagnostic products led to injury or death. Confidence in us, as well as the strength of our brand and reputation, could also be eroded by perceived failures by us or our competitors, even absent any evidence of failure or wrongdoing.

If we are unable to support demand for our current and future Genomics product line, including ensuring that we have adequate capacity to meet increased demand, or we are unable to successfully manage our anticipated growth, our business could suffer.

As the volume of our Genomics product line sales grows, we will need to continue to increase our workflow capacity for sample intake, customer service, billing and general process improvements, expand our internal quality assurance program and extend our Platform to support comprehensive genomic analysis at a larger scale within expected turnaround times. We will need additional certified laboratory scientists and other scientific and technical personnel to process higher volumes of our Genomics tests. Portions of our process are not automated and will require additional personnel to scale. We will also need to purchase additional equipment, some of which can take several months or more to procure, set up and validate, and increase our software and computing capacity to meet increased demand. There can be no assurance that any of these increases in scale, expansion of personnel, equipment, software and computing capacities or process enhancements will be successfully implemented, if at all, or that we will have adequate space in our laboratory facility or be able to secure additional facility space to accommodate such required expansion.

As we commercialize additional Genomics products, we will need to incorporate new equipment, implement new technology systems and laboratory processes, and hire new personnel with different qualifications. Failure to manage this growth or transition could result in turnaround time delays, higher product costs, declining product quality, deteriorating customer service and slower responses to competitive challenges. A failure in any one of these areas could make it difficult for us to meet market expectations for our products and could damage our reputation and the prospects for our business.

Our ability to attract and retain candidates to support the expansion of our Genomics and other products may be influenced by factors outside our control, or factors that we can control but which we fail to execute. For example, global labor shortages, our compensation and benefits offerings, attempts at unionization by our employees, and other factors may impact our ability to recruit, hire, train, and retain employees, which will further impact our ability to meet our growth and expansion goals.

In addition, our ability to manage our growth properly will require us to continue to improve our operational, financial and management controls, as well as our reporting systems and procedures. The time and resources required to implement these new systems and procedures is uncertain and could be demanding, and failure to complete this in a timely and efficient manner could adversely affect our business, financial condition and results of operations.

If third-party payers, including commercial payers and government healthcare programs, do not provide coverage of, or adequate reimbursement for, or reverse or change their policies related to our tests, our business, financial condition and results of operations will be negatively affected.

We received payment on approximately 50% of our clinical oncology NGS tests across all payors performed from January 1, 2021 through December 31, 2022. For the years ended December 31, 2021 and 2022, our average reimbursement for NGS tests billed to insurance in oncology was approximately $1,100 and $1,500, respectively. In addition, we receive a substantial portion of our diagnostic revenue from a limited number of third-party commercial payers, most of which have not contracted with us to be a participating provider. We also receive reimbursement from Medicare for claims submitted with respect to our various diagnostic tests. Approximately 29% and 28% of our clinical tests were for Medicare beneficiaries in the years ended December 31, 2021 and 2022, respectively. Our revenue and commercial success depend on achieving coverage and reimbursement for our tests from payers, including both commercial and government payers. If payers do not provide coverage of, or do not provide adequate reimbursement for our tests, we may need to seek payment from the patient, which may adversely affect demand for our tests.

In addition, because our Genomics and AI Applications diagnostic tests represent new approaches to the diagnosis of diseases, we cannot accurately estimate how they would be priced, whether reimbursement could be obtained or any potential revenue generated. Coverage determinations by a payer may depend on a number of factors, including but not limited to a payer's determination that a test is appropriate, medically necessary or cost-effective. If we are unable to provide payers with sufficient evidence of the clinical utility and validity of our test, they may not provide coverage, may provide limited coverage or may terminate coverage, which will adversely affect our business, financial condition and results of operations. To the extent that more competitors enter our markets, the availability of coverage and the reimbursement rate for our tests may decrease as we encounter pricing pressure from our competitors or as payers decide based on other factors to lower the reimbursement rate for our tests.

Each payer makes its own decision as to whether to provide coverage for our tests, whether to enter into a contract with us and the reimbursement rate for a test. Negotiating with payers is time-consuming, and payers often insist on their standard form contracts, which may allow payers to terminate coverage on short notice, impose significant obligations on us and create additional regulatory and compliance hurdles for us. There can be no guarantee that a payer will provide adequate coverage or reimbursement for our tests or that we can reach an agreement with the payer on reasonable terms without being subject to additional regulatory and compliance risks. In cases where there is no coverage, or we do not have a contracted rate for reimbursement with the payer, the patient is typically responsible for a greater share of the cost of the test, which may result in delay of revenue, increase collection costs or decrease the likelihood of collection. We maintain a financial assistance program under which we assess patient financial need and offer discounted or no-cost tests to certain patients who meet the financial and other eligibility criteria of the program. This may result in scrutiny by payers of our financial assistance program and could result in recoupment actions or termination of coverage of our tests.

Our claims for reimbursement have in the past been denied and may again in the future be denied, and we have needed, and again may need, to appeal such denials in order to get paid. Such appeals may not result in payment. Payers may perform audits of historically paid claims and attempt to recoup funds years after the funds were initially distributed if the payers believe the funds were paid in error or determine that our tests were medically unnecessary. If a payer's audit of our claims results in a negative finding, and we are unable to reverse the finding through appeal, any subsequent recoupment could result in a material adverse effect on our revenue. Additionally, in some cases commercial payers for whom we are not a participating provider may elect at any time to review claims previously paid and determine the amount they paid was excessive. In these situations, the payer typically notifies us of its decision and then offsets the amount it determines to be overpaid against amounts it owes us on current claims. We do not have a mechanism to dispute these retroactive adjustments, and we cannot predict when, or how often, a payer might engage in these reviews, as historic success and payments are not indicative of future success of and payments from such appeals.

Our efforts to become a participating provider of a number of commercial payers may not be successful. When we contract with a payer as a participating provider, reimbursements by the payer are generally made pursuant to a negotiated fee schedule and are limited to only covered indications or where prior approval has been obtained.

Although we are a participating provider with several commercial payers, some large commercial payers have issued non-coverage policies that consider tissue and liquid comprehensive genomic profile testing, including certain of our Genomics tests, as experimental or investigational. If we are not successful in obtaining coverage from such payers, or if other payers issue similar non-coverage policies, our business, financial condition and results of operations could be materially and adversely affected.

Coverage and reimbursement are ever changing, and we are not in control of how our competitors' coverage and pricing strategies are established. Some of our competitors have widespread brand recognition and substantially greater financial and technical resources and development, production and marketing capabilities than we do. Others may develop lower-priced, less complex tests that payers and healthcare professionals could view as functionally equivalent to our products, which could force us to lower the list price of our tests and impact our operating margins and our ability to achieve and maintain profitability. Payers may compare our products to our competitors and utilize them as precedents, which may impact our coverage and reimbursement. In addition, technological innovations that result in the creation of enhanced diagnostic tools that are more effective than ours may enable other clinical laboratories, hospitals, medical personnel or medical providers to provide specialized diagnostic tests similar to ours in a more patient-friendly, efficient or cost-effective manner than is currently possible.

In the United States, many significant decisions about reimbursement for new diagnostics are made by the Centers for Medicare & Medicaid Services, or CMS, which makes a national coverage determination, or NCD, as to whether and to what extent a new diagnostic will be covered and reimbursed under Medicare, although it frequently delegates this authority to local Medicare Administrative Contractors, or MACs, which may make a local coverage determination, or LCD, with respect to coverage and reimbursement. Private payers tend to follow Medicare to a substantial degree. During the year ended December 31, 2022, Medicare claims represented 28% of our clinical testing volume. Given we operate laboratories in multiple MACs and run both LDTs and an FDA-approved assay, the applicable reimbursement determination varies based on the assay being run and the locations where it is being processed. The rules and standards that CMS uses to determine reimbursement rates for our tests are frequently changing and subject to revision, which could have a material impact on our results.

For example, Medicare's NCD for next generation sequencing, or NGS, first established in 2018 and subsequently updated in 2020, states that NGS oncology tests (such as our Tempus|xT and Tempus|xF tests), would be covered by Medicare nationally if and when: (1) performed in a Clinical Laboratory Improvement Amendments, or CLIA, certified laboratory, (2) ordered by a treating physician, (3) the patient meets certain clinical and treatment criteria, including having recurrent, relapsed, refractory, metastatic, or advanced stages III or IV cancer, (4) the test is approved or cleared by the FDA as a companion in vitro diagnostic for an FDA approved or cleared indication for use in that patient's cancer, and (5) results are provided to the treating physician for management of the patient using a report template to specify treatment options. We believe that our xT CDX assay, which received FDA approval in April 2023, will meet the criteria for reimbursement under the NCD. The NGS NCD also states that each MAC may provide local coverage of other next-generation sequencing tests for cancer patients only when the test is performed by a CLIA-certified laboratory, ordered by a treating physician and the patient meets the same clinical and treatment criteria required of nationally covered next-generation sequencing tests under the NGS NCD. An NGS test is typically not covered by Medicare when cancer patients do not have the above-noted indications for cancer under either an NCD or LCD.

National Government Services, Inc. is the local MAC that makes local coverage determinations, or LCDs, for tests conducted at our Chicago laboratory. The Local MAC has issued two LCDs related to genetic testing in cancer, each of which currently requires claims to be submitted under a single current procedural

terminology, or CPT, code that describes the test. Because no CPT code comprehensively describes our NGS oncology tests, we have historically submitted claims using individual codes based on the cancer subtype profiled. On March 25, 2021, the Local MAC instructed us to submit our claims using a different designated CPT code and indicated that such claims would be individually reviewed. Subsequently, on July 23, 2021, the Local MAC issued revised instructions for CPT coding and further updated those instructions on July 29, 2021. Claims submitted under the March 2021 and July 2021 guidance were summarily denied and we are in the process of appealing these denials. The process is typically slow and costly, and multiple levels of appeal may be required for adjudication of outstanding claims.

On February 10, 2022, the Local MAC issued a revised LCD (L37810), and a corresponding Billing and Coding update (A56867). The increased scope of coverage provided for in the revised LCD will result in the CPT code they instructed us to begin billing in July 2021 being reimbursed at the prevailing Medicare rate for those tests which meet the revised coverage criteria. The modified LCD is effective April 1, 2022 and applies to genomic sequence analysis panel tests in the treatment of solid tumors, which primarily impacts our solid tumor assay, xT, given the modified scope of coverage in the revised LCD. We continue to monitor the impact the LCD has on the claims currently in the appeal process; however, the LCD has generally had a favorable impact on reimbursement for claims submitted after April 1, 2022.

Beginning January 1, 2023, a new CPT code went into effect covering full transcriptome testing when performed separately from DNA testing. Historically, our xT assay was actually comprised of two separate and distinct procedures, DNA and RNA. Given there was not an applicable CPT code for RNA, we did not bill that test. With the introduction of the new code, we now have two separate assays, one analyzing DNA – xT and one analyzing RNA – xR that are ordered and billed for separately. We requested that the Local MAC add the new CPT code to the LCD, which they did effective January 1, 2023.

Palmettto is the MAC jurisdiction that determines reimbursement for tests conducted at our Raleigh and Atlanta laboratories through the MolDx program. MolDx requires laboratories to complete a technical assessment process in order to secure reimbursement for tests run at labs in its jurisdiction. Upon receiving approval in the technical assessment process, assays are assigned a z-code and a price at which MolDx will reimburse claims. In conjunction with launching our Raleigh laboratory, we submitted a technical assessment for our xT assay in 2022 and our xF assay in 2023. We received approval on our xT assay in October 2023 and are awaiting feedback on our xF submission.

In addition, pursuant to the regulations of CMS, we cannot bill Medicare directly for tests provided for Medicare beneficiaries in some situations. CMS adopted an exception to its laboratory date of service regulation, and if certain conditions are met, molecular testing laboratories such as us can rely on that exception to bill Medicare directly, instead of seeking payment from the hospital. If this exception is repealed or curtailed by CMS, or its laboratory date of service regulation is otherwise changed to adversely impact our ability to bill Medicare directly, our revenue could be materially reduced.

Furthermore, on September 27, 2023, the Centers for Medicare and Medicaid Services (CMS) published calendar year 2024 preliminary payment determinations for new and reconsidered codes on the Medicare clinical laboratory fee schedule (CLFS), including codes that may apply to tests we offer through our Genomics business. In doing so, CMS rejected the recommendations from experts on the Clinical Diagnostic Laboratory Test (CDLT) Advisory Panel and recommended reimbursement rates for several new procedure codes describing genomic profiling tests that are substantially below our costs to perform them. If CMS fails to revise its preliminary determination after a review and comment period, it may have a significant negative impact on our financial results. We expect a final determination from CMS in November. If CMS fails to revist its preliminary determination after and comment period, or makes other changes to applicable reimbursement rates, it may have a significant impact on financial results.

Some payers have implemented, or are in the process of implementing, laboratory benefit management programs, often using third-party benefit managers to manage these programs. The stated goals of these programs are to help improve the quality of outpatient laboratory services, support evidence-based guidelines for patient care and lower costs. The impact on laboratories, such as us, of active laboratory benefit management by third parties is unclear, and we expect that it would have a negative impact on our revenue in the short term. Payers may resist reimbursement for our tests in favor of less expensive tests, require pre-authorization for our tests, or impose additional pricing pressure on and substantial administrative burden for reimbursement for our tests. We expect to continue to focus substantial resources on increasing adoption of, and coverage and reimbursement for, our current tests and any future tests we may develop. We believe it may take several years to achieve broad coverage and adequate contracted reimbursement with a majority of payers for our tests. However, we cannot predict whether, under what circumstances, or at what price levels payers will cover and reimburse our tests. If we fail to establish and maintain broad adoption of, and coverage and reimbursement for, our tests, our ability to generate revenue could be harmed and our business, financial condition and results of operations could suffer.

If we are unable to obtain or maintain adequate reimbursement for our Genomics product line outside of the United States, our ability to expand internationally will be compromised.

A substantial portion of our Genomics product line revenues come from third-party payer reimbursement. In many countries outside of the United States, various coverage, pricing and reimbursement approvals are required for our tests to be available to patients in significant volume. We expect that it will take several years to establish broad coverage and reimbursement for our tests with payers in countries outside of the United States, and our efforts may not be successful.

Even if public or private reimbursement is obtained, it may cover competing tests, or the reimbursement may be limited to a subset of the eligible patient population or conditioned upon local performance of the tests or other requirements we may have difficulty satisfying.

Reimbursement levels outside of the United States may vary considerably from the domestic reimbursement amounts we receive. We may also be negatively affected by the financial instability of, and austerity measures implemented by, several countries in the European Union, or EU, and elsewhere.

Failure of, or defects in, our Platform's AI software, or increased regulation in this space, could impair our ability to process our data, develop products, or provide test results, and harm our business, financial condition and results of operations.

AI is enabled by or integrated into our Platform and, as a result, our diagnostic and data products, and is therefore a significant element of our current business and our future strategy. As with many developing technologies, AI presents risks and challenges that could affect its further development, adoption, and use, and therefore our business. Many known and unknown risks to AI exist. Some of the currently known risks include accuracy, bias, toxicity, intellectual property infringement or misappropriation, data privacy and cybersecurity and data provenance. Our development and use of AI may result in the incorporation of third-party data, including personal, proprietary or confidential data, into our AI. If we do not have sufficient rights to use the data on which AI relies, we may incur liability through the violation of such laws, third-party privacy or other rights or contracts to which we are a party. Algorithms may be flawed or biased, and datasets may be insufficient, of poor quality or contain biased information. Overcoming technical obstacles and correcting defects or errors could prove to be impossible or impracticable, and the costs incurred may be substantial and adversely affect our results of operations. If the diagnoses, determinations, recommendations, forecasts or analyses that our Platform's AI applications assist in producing are deficient or inaccurate, we could be subjected to competitive harm, potential legal liability and brand or reputational harm. Additionally, content generated by AI may be offensive, biased, or harmful, or violate current or future laws and regulations, and our reliance on AI could pose ethical concerns and lead to a lack of human oversight and control.

In addition, inappropriate or controversial data practices by data scientists, engineers and end-users of our or our competitors' products could impair the acceptance of AI products. Though our business practices are designed to mitigate many of these risks, if we enable or offer AI products that are controversial because of their purported or real impact on human rights, privacy, employment, or other social issues, we may experience brand or reputational harm. Additionally, regulation in the AI space is constantly changing and increasing, and may make it difficult for us to continue using our AI approach to diagnostics and data analysis. AI is the subject of evolving review by various U.S. governmental and regulatory agencies, including the SEC and the FTC, and various U.S. states and other foreign jurisdictions are applying, or are considering applying, their cybersecurity and data protection laws to AI, particularly generative AI, and/or are considering general legal frameworks on AI (such as proposals for the European Union to enact an Artificial Intelligence Act).

If our Platform does not function reliably, fails to meet expectations in terms of performance, or cannot be fully utilized due to increasing regulation or reputational concerns, we may be unable to provide such services, or our customers may stop using our products.

In addition, the use and deployment of AI presents complexities and challenges with respect to compliance with applicable laws and regulations, particularly in light of our dual status as both a technology company and a healthcare provider of diagnostic testing services. Life sciences companies may underwrite or fund, in part, the development of AI algorithms, which may require us to disclose applicable funding sources and which may, as a result, slow the adoption of such technologies. In addition, to the extent the output of an algorithm we develop or deploy recommends, directly or indirectly, the potential ordering of a product or service reimbursable by a federal healthcare program, we may encounter enforcement challenges even when such recommendations are based on objective clinical guidelines and criteria. If such events occur, it could have a materially adverse impact on our business operations and reputation.

We may experience challenges with the acquisition, development, enhancement or deployment of technology necessary for our businesses.

Our Platform requires sophisticated computer systems and software in order to accurately and efficiently capture, service and process increasing volumes of health data, in particular a growing number of genomic profiles generated by our customers through various NGS test kits, sequencers and sample materials from different manufacturers. Some of the technologies are changing rapidly and we must continue to adapt to these changes in a timely and effective manner at an acceptable cost. There can be no assurance that we will be able to develop, acquire, enhance, deploy or integrate new technologies, including technologies needed to integrate genomics data into our Platform, that these new technologies will be effective and efficient, will meet our needs or achieve our expected goals or that we will be able to do so as quickly or cost effectively as our competitors.

If we cannot compete successfully with our competitors, we may be unable to increase or sustain our revenue or to achieve and then sustain profitability.

Growing understanding of the importance of biomarkers linked with therapy selection and response is leading to more companies offering products in genomic testing, including NGS diagnostics and PCR profiling. In addition, there are a number of healthcare technology companies providing data analysis products, including AI-driven data platforms and diagnostic products.

Our competitors with respect to our Genomics products include certain diagnostic companies, such as Foundation Medicine, Inc., which was acquired by Roche Holdings, Inc., Caris Life Sciences, Guardant Health, Inc., Neogenomics, and ResolutionBio, which was acquired by Agilent, among others, with respect to our currently marketed precision oncology tests, and legacy diagnostic laboratories, such as Quest and LabCorp. In addition, our competitors for our pharmacogenetic test in neuropsychology include Myriad Genetics, Inc. and Genomind, Inc.

Our competitors with respect to our Data and Services products include Flatiron Health, Inc., IQVIA Holdings Inc., and ConcertAI, among others. Furthermore, our Data and Services products also face competition

from CROs, such as Fortrea, ICON, Syneos, PPD, and others, who provide data and clinical trial matching services to pharmaceutical and biotechnology companies.

Our competitors with respect to our AI Applications products include Roche Holdings, Inc., Caris Life Sciences, Guardant Health, Inc., Illumina, Inc., and others, with respect to our TO test, and Myriad Genetics, Inc., Caris Life Sciences, and others, with respect to our HRD test. We may also compete with companies developing or commercializing algorithm-based diagnostics using a variety of different data modalities, including digital pathology companies such as PathAI, Inc. and PaigeAI. In cardiology, we believe our competitors may include HeartFlow Inc., Anumana, Inc., and Eko Devices, Inc. In addition, we are aware that academic medical centers may be developing their own AI Applications and may decide to enter this market.

Some of our competitors and potential competitors may have longer operating histories; larger customer bases; greater brand recognition and market penetration; substantially greater financial, technological and research and development resources and selling and marketing capabilities; and more experience dealing with third-party payers. As a result, they may be able to respond more quickly to changes in customer requirements, devote greater resources to the development, promotion and sale of their products than we do or sell their products at prices designed to win significant levels of market share. We may not be able to compete effectively against these organizations. Increased competition and cost-saving initiatives on the part of governmental entities and other third-party payers are likely to result in pricing pressures, which could harm our sales or ability to gain market share. In addition, competitors may be acquired by, receive investments from or enter into other commercial relationships with larger, well-established and well-financed companies. Certain of our competitors may be able to secure key inputs from vendors on more favorable terms, devote greater resources to marketing and promotional campaigns, adopt more aggressive pricing policies and devote substantially more resources to product development than we can. In addition, companies or governments that control access to genetic testing through umbrella contracts or regional preferences could promote our competitors or prevent us from selling certain products. If we are unable to compete successfully against current and future competitors, we may be unable to increase market acceptance and sales of our tests, which could prevent us from increasing our revenue or achieving profitability and could cause our stock price to decline.

The sizes of the markets for our current and future products have not been established with precision, and may be smaller than we estimate.

Our estimates of the annual total addressable markets for our current products and products under development are based on a number of internal and third-party estimates, including, without limitation, the number of patients profiled with genomic diagnostics in the diseases we test, the assumed prices for genomic and algorithmic testing products, the number of genomic and algorithmic tests that we are able to successfully develop and commercialize, and the existing market for multimodal patient data and clinical trial matching services. While we believe our assumptions and the data underlying our estimates are reasonable, these assumptions and estimates may not be correct and the conditions supporting our assumptions or estimates may change at any time, thereby reducing the predictive accuracy of these underlying factors. As a result, our estimates of the annual total addressable market for our current or future products may prove to be incorrect. If the actual number of patients who would benefit from our products, the price at which we can sell our products, the number of genomic or algorithmic tests we are able to successfully develop and commercialize, or the annual total addressable market for our products is smaller than we have estimated, it may impair our sales growth and have an adverse impact on our business, financial condition and results of operations.

The industries in which we operate are subject to rapid change, which could make our Platform, our current products and any future products we may develop obsolete.

The healthcare diagnostic and data industries are characterized by rapid changes, including technological and scientific breakthroughs, frequent new product introductions and enhancements and evolving industry standards, any of which could make our current and future products obsolete. Our future success will depend

on our ability to keep pace with the evolving needs of our customers on a timely and cost-effective basis and to pursue new market opportunities that develop as a result of scientific and technological advances. In recent years, there have been numerous advances in technologies relating to genomic diagnostic testing, as well as advances in the application of AI to healthcare diagnostics and decision-making. We must continuously enhance our Platform and our existing diagnostic, data and analytics products and develop new products to keep pace with evolving standards of care. If we do not update our product offerings to reflect new scientific knowledge about disease biology, information about new therapies or relevant clinical trials, or insights regarding the current treatment landscape for applicable indications and advances in computational biology, software development, and AI, our Platform and products could become obsolete and sales of our current products and any new products we may develop could decline or fail to grow as expected. Further, to the extent that pharmaceutical or biotechnology companies are able to develop therapies or technologies that eradicate or substantially limit the incidence of diseases for which we sell diagnostics, the market for our applicable products could disappear entirely.

Our research and development strategy emphasizes rapid innovation and advancement of successful hires who may not have prior industry expertise, and we frequently prioritize patient care and customer satisfaction over short-term financial results. If we cannot maintain or properly manage our culture as we grow, our business may be harmed.

We have a research and development strategy that encourages employees to quickly develop and launch technologies intended to solve our customers' most important problems and prioritizes the advancement of Platform and product development, technology and engineering employees to positions of significant responsibility based on merit despite, in some cases, limited prior work or industry experience. Successful entry-level hires are often quickly advanced and rewarded with significant responsibilities, including in important customer-facing roles as project managers, development leads, and product managers. As our business grows and becomes more complex, our cultural emphasis on moving quickly and staffing research and development personnel, including certain customer-facing employees, without significant industry experience may result in unintended outcomes or in decisions that are poorly received by customers or other stakeholders. For example, in many cases we launch, at our expense, pilot deployments with customers without a long-term contract in place, and some of those deployments have not resulted in the customer's adoption or expansion of its use of our products, or the generation of significant, or any, revenue or payments. In addition, as we continue to grow, including geographically, and as we develop a public company infrastructure, we may find it difficult to maintain our culture.

Our culture also prioritizes patient care and customer satisfaction over short-term financial results, and we frequently make product decisions that may reduce our short-term revenue or cash flow if we believe that the decisions are consistent with our mission and thereby have the potential to improve our financial performance over the long term. These decisions may not produce the long-term benefits and results that we expect or may be poorly received in the short term by the public markets, in which case our customer growth and our business, financial condition and results of operations may be harmed.

We may not be able to successfully market, sell or distribute our products, and if we are unable to expand our sales organization to adequately address our customers' needs, our business, financial condition and results of operations may be adversely affected.

We may not be able to market, sell or distribute our data products and diagnostic tests, and other products we may develop effectively enough to support our planned growth. We currently sell our Genomics and AI Applications tests to clinicians and hospital systems in the United States through our own sales organization and may leverage distributors to help sell our Genomics diagnostic tests in international markets, and we sell our Data and Services products to pharmaceutical and biotechnology companies through our business development team.

Each of our target markets is large, distinct and diverse. As a result, we believe it is necessary for many of our sales representatives and business development managers to have established diagnostic- or healthcare data-focused expertise. Competition for such employees within the precision diagnostics and healthcare data analytics industries is intense. We may not be able to attract and retain personnel or be able to build an efficient and effective sales organization or business development team, which could negatively impact sales and market acceptance of our products and limit our revenue growth and potential profitability.

Our expected future growth will impose significant added responsibilities on members of management, including the need to identify, recruit, maintain and integrate additional employees. Our future financial performance and our ability to commercialize our products, to increase our sales and to compete effectively will depend, in part, on our ability to manage this potential future growth effectively, without compromising quality.

If we are not successful in executing our strategy to increase sales of our Data and Services products to large pharmaceutical and biotechnology customers, our results of operations may suffer.

An important part of our growth strategy is to increase sales of Data and Services products, and in particular our Insights product, to large pharmaceutical and biotechnology companies. Sales to large companies involve risks that may not be present (or that are present to a lesser extent) with sales to small-to-mid-sized entities. These risks include:

- increased leverage held by large customers in negotiating contractual arrangements with us;
- changes in key decision makers within these organizations that may negatively impact our ability to negotiate in the future;
- customer employees may perceive that our products pose a threat to their internal control and advocate for internally developed solutions over our product;
- resources may be spent on a potential customer that ultimately elects not to purchase our products;
- more stringent requirements in our service contracts, including stricter service response times, and increased penalties for any failure to meet service requirements;
- increased competition from larger competitors that traditionally target large enterprises and government entities;
- less predictability in completing some of our sales than we do with smaller customers; and
- the potential that advancements in AI allow our Data customers to develop models that serve as functional equivalents of our database and render our own products obsolete.

Selling to large pharmaceutical and biotechnology companies is often a lengthy process, generally taking several months and sometimes longer. Following the establishment of the relationship, the negotiation of purchase terms can be time-consuming, and a potential customer may require an extended evaluation and testing period. Due to the length, size, scope, and requirements of these evaluations, we frequently provide short-term pilot deployments of our Data and Services products at no or low cost. We sometimes spend substantial time, effort and money in our sales efforts without producing any sales. The success of the investments that we make to acquire customers depends on factors such as our ability to identify potential customers for which our data products have an opportunity to add significant value to the customer's business, our ability to identify and agree with the potential customer on an appropriate pilot deployment to demonstrate the value of our products, and whether we successfully execute on such pilot deployment. Even if the pilot deployment is successful, we or the customer could choose not to enter into a larger contract for a variety of reasons. For example, product purchases by large companies are frequently subject to budget constraints, leadership changes, multiple approvals, and unplanned administrative, processing, and other delays, any of which could significantly delay or entirely prevent our realization of sales. As a result, in the event a sale is not completed or is canceled or delayed, we may have incurred substantial expenses, making it more difficult for us to become profitable or otherwise negatively impacting our financial results.

Finally, large companies typically (i) have longer implementation cycles, (ii) require greater product functionality and scalability and a broader range of services, including design services, (iii) demand that vendors take on a larger share of risks, (iv) sometimes require acceptance provisions that can lead to a delay in revenue recognition and (v) expect greater payment flexibility from vendors.

All of these factors can add further risk to business conducted with these customers. If sales expected from a large customer for a particular quarter are not realized in that quarter or at all, our business, financial condition and results of operations could be materially and adversely affected.

If our existing customers do not renew their licenses, do not buy additional products from us, or renew at lower prices, our business and operating results will suffer.

For the year ended December 31, 2022, we derived $47.9 million, or approximately 39% and 15%, of our Data and Services product line revenue and total revenue, respectively, from three customers. We expect to continue to derive a significant portion of our Data and Services product line revenues from renewal of existing agreements. As a result, maintaining the renewal rate of our existing customers and selling additional products to them is critical to our future operating results. Factors that may affect the renewal rate for our customers and our ability to sell additional products to them include:

- the price, performance, and functionality of our products;
- the availability, price, performance, and functionality of competing products;
- the effectiveness of our support services;
- our ability to develop complementary products;
- the success of competitive products or technologies;
- the stability, performance, and security of our technological infrastructure; and
- the business environment of our customers.

We deliver our Insights product through license agreements that allow our customers to use de-identified datasets for a specified term or for specified uses. Our customers have no obligation to renew their licenses for our Data and Services products after the license ends, and many of our contracts may be terminated or reduced in scope either immediately or upon notice. In addition, our customers may negotiate terms less advantageous to us upon renewal, which may reduce our revenues from these customers. Factors that are not within our control may contribute to a reduction in our Data and Services product line revenues. For instance, our customers may change the indications in which they are conducting research and development, which could result in a reduced demand for our products and thus a lower aggregate renewal fee. The loss, reduction in scope, or delay of a large contract, or the loss or delay of multiple contracts, could materially adversely affect our business, financial condition and results of operations.

Our future operating results also depend, in part, on our ability to sell expanded products to our existing customers. For example, the willingness of existing customers to expand their use of our Insights product will depend on our ability to deliver meaningful information and insights relevant to our customers' research and development endeavors, which we may not do successfully. If our customers fail to renew their agreements, renew their agreements upon less favorable terms or at lower fee levels, or fail to purchase expanded licenses from us, our revenues may decline and our future revenues may be constrained.

A significant portion of our Data and Services product line revenues are generated by sales to life sciences industry customers, and factors that adversely affect this industry could also adversely affect our Data business sales.

A significant portion of our current Data and Services products sales are to customers in the life sciences industry, in particular the pharmaceutical and biotechnology industry. Demand for our Data and Services

products could be affected by factors that adversely affect the life sciences industry, including macroeconomic and market conditions that may adversely impact earlier stage biotechnology companies. The life sciences industry is highly regulated and competitive and has experienced periods of considerable consolidation. Consolidation among our customers could cause us to lose customers, decrease the available market for our products, and adversely affect our business, financial condition and results of operations. In addition, changes in regulations that make investment in the life sciences industry less attractive or drug development more expensive could adversely impact the demand for our data analytics products. For these reasons and others, selling data analytics products to life sciences companies can be competitive, expensive, and time consuming, often requiring significant upfront time and expense without any assurance that we will successfully complete a sale. Accordingly, our operating results and our ability to efficiently provide our products to life sciences companies and to grow or maintain our customer base could be adversely affected as a result of factors that affect the life sciences industry generally.

We have invested and expect to continue to invest in research and development efforts that further enhance our data analytics. Such investments may affect our operating results, and, if the return on these investments is lower or develops more slowly than we expect, our revenue and operating results may suffer.

We have invested and expect to continue to invest in research and development efforts that further enhance our data analytics, often in response to our customers' requirements. These investments may involve significant time, risks, and uncertainties, including the risk that the expenses associated with these investments may affect our margins and operating results and that such investments may not generate sufficient revenues to offset liabilities assumed and expenses associated with these new investments. The healthcare data analytics industry changes rapidly as a result of technological and product developments, which may render our Platform and products less desirable. We believe that we must continue to invest a significant amount of time and resources in our Platform and products to maintain and improve our competitive position. If we do not achieve the benefits anticipated from these investments, if the achievement of these benefits is delayed, or if a slowdown in general computing power impacts the rate at which we expect our physics-based simulations to increase in power and domain applicability, our revenue and operating results may be adversely affected.

If we are unable to collect receivables from our customers, our operating results may be adversely affected.

While the majority of our current customers are well-established large companies and hospital systems, we also provide our Data and Services products to smaller institutions and companies and our Genomics product line to individuals. Our financial success depends upon the creditworthiness and ultimate collection of amounts due from our customers, including our smaller customers with fewer financial resources. If we are not able to collect amounts due from our customers, we may be required to write-off significant accounts receivable and recognize bad debt expenses, which could materially and adversely affect our operating results.

We rely on a limited number of suppliers or, in some cases, sole suppliers, for some of our laboratory instruments and materials and may not be able to find replacements or promptly transition to alternative suppliers.

We rely on a limited number of suppliers or, in some cases, sole suppliers, including Illumina Inc., or Illumina, for certain sequencers, reagents, blood tubes and other equipment, instruments and materials that we use in our laboratory operations. Purchases from this supplier accounted for approximately 25%, 35%, 38%, and 34% of total vendor payments for the year ended December 31, 2021 and 2022, and the nine months ended September 30, 2022 and 2023, respectively. Amounts due to this supplier approximated $0.9 million, $8.2 million, and $11.6 million at December 31, 2021 and 2022, and September 30, 2023, respectively. An interruption in our laboratory operations could occur if we encounter delays or difficulties in securing these laboratory equipment, instruments or materials, and if we cannot then obtain an acceptable substitute. Any such interruption could significantly and adversely affect our business, financial condition and results of operations.

We rely on Illumina as the sole supplier of the sequencers and as the sole provider of maintenance and repair services for these sequencers. Any disruption in operations of Illumina or other sole or limited suppliers or termination or suspension of our relationships with them could materially and adversely impact our supply chain and laboratory operations of our diagnostic testing business and thus our ability to conduct our business and generate revenue. These limited or sole suppliers could engage in diverse types of businesses, including selling products in competition with us, and there can be no assurance that we can continue to receive required equipment, instruments or materials from them.

We believe that there are only a limited number of manufacturers that are capable of supplying and servicing the equipment and materials necessary for our laboratory operations, including sequencers and various associated reagents, and potentially replacing our current suppliers. The use of equipment or materials furnished by replacement suppliers would require us to alter our laboratory operations. Transitioning to a new supplier would be time-consuming and expensive, may result in interruptions in our laboratory operations, could affect the performance specifications of our laboratory operations or could require that we revalidate our tests. There can be no assurance that we will be able to secure alternative equipment, reagents and other materials, bring such equipment, reagents and materials online, and revalidate our tests without experiencing interruptions in our workflow. In the case of an alternative supplier for Illumina, for example, there can be no assurance that replacement sequencers and various associated reagents will be available or will meet our quality control and performance requirements for our laboratory operations. If we should encounter delays or difficulties in securing, reconfiguring or integrating the equipment and reagents we require for our products or in revalidating our products, our business, financial condition and results of operations could be materially and adversely affected.

Certain disruptions in supply of, and changes in the competitive environment for, raw materials and components integral to the manufacturing of our products may adversely affect our ability to achieve and maintain profitability.

We use a broad range of materials and supplies, including chemicals and other electronic components, in our Genomics product line. A significant disruption in the supply of these materials, including disruptions like those stemming from the COVID-19 pandemic, could decrease production and shipping levels, materially increase our operating costs and materially adversely affect our profit margins. Shortages of materials or interruptions in transportation systems, labor strikes, work stoppages, infectious disease, epidemics or pandemics including COVID-19, outbreaks, conflict (including the armed conflicts between Russia and Ukraine and Israel and Hamas), civil unrest, acts of terrorism or other interruptions to or difficulties in the employment of labor (such as strikes by unionized workforces) or transportation in the markets in which we purchase materials, components and supplies for the production of our diagnostic tests, in each case may adversely affect our ability to maintain our testing capacity. Unforeseen end-of-life or unavailability for certain components, such as enzymes, could cause backorders as we modify our product specifications to accommodate replacement components. If we were to experience a significant disruption in the supply of, or prolonged shortage of, critical components from any of our suppliers and could not procure the components from other sources, we would be unable to sustain our testing capacity, which would adversely affect our sales, margins and customer relations.

If our existing laboratory and storage facilities become damaged or inoperable or we are required to vacate our existing facilities, our ability to perform our tests and pursue our research and development efforts may be jeopardized.

We currently derive nearly all of our diagnostic revenue from tests performed at laboratory facilities located in Chicago, Illinois, Atlanta, Georgia, and Raleigh, North Carolina, and these facilities generally do not have completely redundant capabilities. Further, while we are currently in the process of expanding the number and type of diagnostic tests within our laboratory facility in Raleigh, North Carolina, there is no assurance that we will successfully transition in a timely manner or at all, and we may not be able to fully operationalize this facility to its capacity. Our facilities and equipment could be harmed or rendered inoperable by natural or man-made disasters, including war, fire, earthquake, power loss, communications failure or terrorism, which may

render it difficult or impossible for us to operate our Genomics product line for some period of time and which may also cause us to lose valuable stored tissue samples, including organoids. The inability to perform our tests or to reduce the backlog that could develop if a facility is inoperable for even a short period of time, may result in the loss of customers or harm to our reputation, and we may be unable to regain those customers or repair our reputation. Furthermore, our facilities and the equipment we use to perform our research and development work could be unavailable or costly and time-consuming to repair or replace. It would be difficult, time-consuming and expensive to rebuild a facility, to locate and qualify a new facility or enable a third party to practice our proprietary technology, particularly in light of licensure and accreditation requirements. Even if we are able to find a third party with such qualifications to perform our tests, the parties may be unable to agree on commercially reasonable terms. Our physical laboratory facilities are also subject to regulatory oversight, such by the federal Occupational Safety and Health Administration, or OSHA, and certain state analogs. On occasion, certain safety issues are reported directly to OSHA. While we have been successful in promptly remediating any such issues, there is no guarantee we will be able to do so in the future, and these regulatory bodies could intervene and suspend our operations, which could have a material impact on our business.

We carry insurance for damage to our property and disruption of our business, but this insurance may not cover all of the risks associated with damage or disruption to our facilities and business, may not provide coverage in amounts sufficient to cover our potential losses and may not continue to be available to us on acceptable terms, if at all.

We rely on commercial courier delivery services to transport samples to our laboratory facility in a timely and cost-efficient manner and if these delivery services are disrupted, our business will be harmed.

Our business depends on our ability to deliver test results quickly and reliably to our customers. Blood and tissue samples sent from the United States by patients, physicians or hospital pathology departments are typically received within days for analysis at our Chicago, Atlanta, or Raleigh facilities. Disruptions in delivery services to transport samples to that facility, whether due to labor disruptions, bad weather, natural disaster, terrorist acts or threats or for other reasons could adversely affect specimen integrity and our ability to process samples in a timely manner, delay our provision of test results to our customers, and ultimately our reputation and our business. In addition, if we are unable to continue to obtain expedited delivery services to transport samples to us on commercially reasonable terms, our business, financial condition and results of operations may be adversely affected.

If we cannot provide quality technical support and services for our Data and Services products, we could lose customers and our business and prospects will suffer.

Our ability to provide relevant information to customers of our Data business, and in particular of our Insights product, depends substantially on our ability to provide quality technical support and services during the term of their license. Accordingly, we need highly trained technical support and services personnel. Hiring support and services personnel is very competitive in our industry due to the limited number of people available with the necessary scientific and technical backgrounds and ability to understand our products and the needs of our customers. To effectively support new customers and the expanding needs of current customers, we will need to substantially expand our support and services staff and develop our support infrastructure and processes. If we are unable to attract, train or retain the number of highly qualified technical services personnel that our business needs, our business and prospects will suffer.

Seasonality may cause fluctuations in our revenue and results of operations.

We believe that there are significant seasonal factors which may cause sales of our products, such as our Insights product and our infectious disease tests, to vary on a quarterly or yearly basis and increase the magnitude of quarterly or annual fluctuations in our operating results. We believe that this seasonality results from a number of factors, including the procurement and budgeting cycles of many of our customers, especially pharmaceutical

and biotechnology customers. These customers typically have calendar year fiscal years, which result in a disproportionate amount of their purchasing activity occurring during our fourth quarter. These factors have contributed, and may contribute in the future, to substantial fluctuations in our quarterly operating results. Because of these fluctuations, it is possible that in some quarters our operating results will fall below the expectations of securities analysts or investors. If that happens, the market price of our common stock would likely decrease. These fluctuations, among other factors, also mean that our operating results in any particular period may not be relied upon as an indication of future performance. Seasonal or cyclical variations in our sales have in the past, and may in the future, become more or less pronounced over time, and have in the past materially affected, and may in the future materially affect, our business, financial condition and results of operations.

Risks Related to Our Highly Regulated Industry

Our collection, processing, use and disclosure of personally identifiable information, including patient and employee information, is subject to privacy and security regulations, and our failure to comply with those regulations or to adequately secure the information in our possession could result in significant liability or reputational harm.

The privacy and security of personally identifiable information and/or protected health information stored, maintained, received or transmitted, including electronically, is a major issue in the United States and abroad. We collect, process, maintain, retain, evaluate, utilize and distribute large amounts of personal health and financial information and other confidential and sensitive data about our customers, employees and others in the ordinary course of our business. Concerns about and claims challenging our practices with regard to the collection, use, retention, disclosure or security of personally identifiable information, protected health information, or other privacy-related matters, even if unfounded and even if we are in compliance with applicable laws, could damage our reputation and harm our business, financial condition and results of operations.

Numerous federal, state and foreign laws and regulations govern collection, dissemination, use and confidentiality of personally identifiable information and protected health information, including HIPAA; state privacy and confidentiality laws (including state laws requiring disclosure of breaches); federal and state consumer protection and employment laws; and European and other foreign data protection laws. A range of enforcement agencies exist at both the state and federal levels that can enforce these laws and regulations. New privacy legislation may create additional rights for consumers and impose additional requirements on businesses. As these laws and regulations increase in complexity and number, they may change frequently, sometimes conflict and increase our compliance efforts, costs and risks.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, establishes a set of national privacy and security standards for the protection of PHI by health plans, healthcare clearinghouses, and certain healthcare providers that submit certain covered transactions electronically, or ‘‘covered entities,’’ and their ‘‘business associates,’’ which are persons or entities that perform certain services for, or on behalf of, a covered entity that involve creating, receiving, maintaining or transmitting PHI, and their covered subcontractors. We are a covered entity under HIPAA, and also routinely receive large amounts of PHI as a business associate under HIPAA, and therefore must comply with its requirements to protect the privacy and security of health information and must provide individuals with certain rights with respect to their health information. If we engage a business associate to help us carry out healthcare activities and functions, we must have a written business associate contract or other arrangement with the business associate that establishes specifically what the business associate has been engaged to do and requires the business associate to comply with the same requirements.

Penalties for violations of these laws vary. For instance, a single breach incident can result in findings of violations of multiple HIPAA provisions. Penalties for failure to comply with a requirement of HIPAA and HITECH vary significantly, and include civil monetary penalties for each provision of HIPAA that is violated and, in certain circumstances, criminal penalties, including imprisonment and/or additional fines. A person who

knowingly obtains or discloses individually identifiable health information in violation of HIPAA may face additional fines and up to one-year imprisonment. The criminal penalties increase if the wrongful conduct involves false pretenses or the intent to sell, transfer, or use identifiable health information for commercial advantage, personal gain, or malicious harm. In addition, any allegation that we have violated HIPAA, regardless of its merit, could harm our reputation and consume significant internal resources. Responding to government investigations regarding alleged violations of these and other laws and regulations, even if ultimately concluded with no findings of violations or no penalties imposed, can consume company resources and impact our business and, if public, harm our reputation.

Data privacy remains an evolving landscape at both the domestic and international level, with new regulations coming into effect. For example, various states, such as California, Massachusetts, and others, have implemented similar privacy laws and regulations, such as the California Confidentiality of Medical Information Act, that impose restrictive requirements regulating the use and disclosure of health information and other personally identifiable information, and the California Consumer Privacy Act, which went into effect on January 1, 2020, and creates new data privacy rights for users. The CCPA requires covered businesses that process personal information of California residents to disclose their data collection, use and sharing practices. Further, the CCPA provides California residents with new data privacy rights (including the ability to opt out of certain disclosures of personal data), imposes new operational requirements for covered businesses, provides for civil penalties for violations as well as a private right of action for data breaches and statutory damages (that is expected to increase data breach class action litigation and result in significant exposure to costly legal judgements and settlements). Aspects of the CCPA and its interpretation and enforcement remain uncertain. In addition, the CCPA was expanded on January 1, 2023, when the California Privacy Rights Act of 2020, or CPRA, became operative. The CPRA, among other things, gives California residents the ability to limit use of certain sensitive personal information, further restricts the use of cross-contextual advertising, establishes restrictions on the retention of personal information, expands the types of data breaches subject to the CCPA's private right of action, provides for increased penalties for CPRA violations concerning California residents under the age of 16, and establishes a new California Privacy Protection Agency to implement and enforce the CPRA. Although there are limited exemptions for clinical trial data under the CCPA, the CCPA and other similar laws could impact our business activities depending on how they are interpreted. New legislation proposed or enacted in various other states will continue to shape the data privacy environment nationally. For example, Virginia recently passed its Consumer Data Protection Act, and Colorado recently passed the Colorado Privacy Act, both of which differ from the CPRA and became effective in 2023. Additional states have since also passed comprehensive privacy laws with additional obligations and requirements on businesses. Certain state laws may be more stringent or broader in scope, or offer greater individual rights, with respect to confidential, sensitive and personal information than federal, international or other state laws, and such laws may differ from each other, which may complicate compliance efforts.

In addition, all 50 U.S. states and the District of Columbia have enacted breach notification laws that may require us to notify patients, customers, employees or regulators in the event of unauthorized access to or disclosure of personal or confidential information experienced by us or our service providers. These laws are not consistent, and compliance in the event of a widespread data breach is difficult and may be costly. Moreover, states have been frequently amending existing laws, requiring attention to changing regulatory requirements. We also may be contractually required to notify patients or other counterparties of a security breach. Although we may have contractual protections with our service providers, any actual or perceived security breach could harm our reputation and brand, expose us to potential liability or require us to expend significant resources on data security and in responding to any such actual or perceived breach. Any contractual protections we may have from our service providers may not be sufficient to adequately protect us from any such liabilities and losses, and we may be unable to enforce any such contractual protections. In addition to government regulation, privacy advocates and industry groups have and may in the future propose self-regulatory standards from time to time. These and other industry standards may legally or contractually apply to us, or we may elect to comply with such standards.

These laws and regulations are not necessarily preempted by HIPAA, particularly if a state affords greater protection to individuals than HIPAA. Where state laws are more protective, we may have to comply with the stricter provisions. In addition to fines and penalties imposed upon violators, some of these state laws also afford private rights of action to individuals who believe their personal information has been misused. The interplay of federal and state laws may be subject to varying interpretations by courts and government agencies, creating complex compliance issues for us and our clients, and potentially exposing us to additional expense, adverse publicity and liability. Further, as regulatory focus on privacy issues continues to increase and laws and regulations concerning the protection of personal information expand and become more complex, these potential risks to our business could intensify. Changes in laws or regulations associated with the enhanced protection of certain types of sensitive data, such as PHI or other types of sensitive personally identifiable information, or PII, or increased demands for enhanced data security infrastructure applied to personally identifiable information, could greatly increase our costs of providing our products, decrease demand for our products, reduce our revenue and/or subject us to additional risks.

In addition, the interpretation and application of consumer, health-related, and data protection laws, especially with respect to genetic samples and data, in the United States, the EU (including all countries in the EEA), and elsewhere are often uncertain, contradictory, and in flux. We may operate in a number of countries outside of the United States whose laws may in some cases be more stringent than the requirements in the United States. For example, EU member countries have specific requirements relating to cross-border transfers of personal data to certain jurisdictions, including to the United States where our laboratories reside. In addition, some countries have stricter consumer notice and/or consent requirements relating to personal data collection, use or sharing, more stringent requirements relating to organizations' privacy programs and provide stronger individual rights. Moreover, international privacy and data security regulations continue to become more complex and have greater consequences. For instance, the General Data Protection Regulation, or GDPR, went into effect in May 2018 and imposes stringent data protection requirements for controllers and processors of personal data of persons within the EU. The GDPR applies to any company established in the EU as well as to those outside the EU if they collect and use personal data in connection with the offering of goods or services to individuals in the EU or the monitoring of their behavior. The GDPR enhances data protection obligations for processors and controllers of personal data, including, for example, higher standards for obtaining consent from individuals to process their personal data, more robust disclosures to individuals and a strengthened individual data rights regime, timelines for data breach notifications as short as 72 hours for notification to supervisory authorities, limitations on retention of information, increased requirements pertaining to health data, other special categories of personal sequencing and pseudonymized (i.e., key-coded) data and additional obligations when we contract third-party processors in connection with the processing of the personal data. The GDPR provides that EU member states may make their own further laws and regulations limiting the processing of personal data, including genetic, biometric or health data, which could limit our ability to use and share personal data or could cause our costs to increase, and harm our business, financial condition and results of operations. Failure to comply with the requirements of GDPR may result in significant fines of up to €20,000,000 or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher, and other administrative penalties. European data protection authorities have already imposed fines for GDPR violations up to, in some cases, hundreds of millions of Euros. The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies, and obtain compensation for damages resulting from violations of the GDPR. Failure to comply with the GDPR and other applicable privacy or data security-related laws, rules or regulations could result in material penalties imposed by regulators, affect our compliance with client contracts and have an adverse effect on our business, financial condition and results of operations.

European data protection law, including the GDPR, also imposes strict rules on the transfer of personal data from Europe to the United States and other countries unless the parties to the transfer have implemented specific safeguards to protect the transferred personal data. These obligations may be interpreted and applied in a manner that is inconsistent from one jurisdiction to another and may conflict with other requirements or our practices. In addition, these rules are constantly under scrutiny. For example, the EU-US Privacy Shield and the Swiss-US

Privacy Shield were both invalidated by the Court of Justice of the EU, in a case known colloquially as "Schrems II," and the Swiss Commissioner, respectively. Further, the EU Standard Contractual Clauses are the subject of legal challenges in European courts and the Standard Contractual Clauses as well as any successor version(s) of those clauses may face additional challenges in the future and be found similarly invalidated, and the absence of successor safeguards for continued data transfer could require us to create duplicative, and potentially expensive, information technology infrastructure and business operations in Europe or limit our ability to collect and use personal information collected in Europe. Notwithstanding the foregoing challenges, the use of the EU Standard Contractual Clauses has also been called into question by the European courts. Use of the standard contractual clauses must now be assessed on a case-by-case basis taking into account the legal regime applicable in the destination country, in particular regarding applicable surveillance laws and relevant rights of individuals with respect to the transferred data. On July 11, 2023, the European Commission entered into force its adequacy decision for the EU-US Data Privacy Framework (a new framework for transferring personal information from the EEA to the United States), having determined that such framework ensures that the protection of personal information transferred from the EEA to the United States will be comparable to the protection offered in the EU. However, this decision will likely face legal challenges and ultimately may be invalidated by the CJEU just as the EU-US Privacy Shield was. On October 12, 2023, a UK-U.S. Data Bridge came into force to facilitate transfers of personal data from the United Kingdom to the United States. If we are unable to implement a valid compliance mechanism for cross-border personal data transfers, we may face increased exposure to regulatory actions, substantial fines and injunctions against processing or transferring personal data outside of the EEA and the United Kingdom, including to the United States.

Furthermore, in June 2021, the European Commission adopted new standard contractual clauses under the GDPR for transfers of personal data outside the EEA to countries that the European Commission has not deemed to provide an adequate level of protection for such personal data. If we elect to rely on the new standard contractual clauses for personal data transfers out of Europe, we may be required to expend significant resources to update our contractual arrangements and to meet the obligations the new standard contractual clauses impose; for example, we may be required to conduct transfer impact assessments for such cross-border personal data transfers and implement additional security measures. In addition, the EU Commission has proposed a new ePrivacy Regulation that would address various matters, including provisions specifically aimed at the use of cookies to identify an individual's online behavior, and any such ePrivacy Regulation may provide for new compliance obligations and significant penalties. Any of these changes to EU data protection law or its interpretation could disrupt and harm our business. We rely on a mixture of safeguards to transfer personal data from the EU to the United States, and could be impacted by changes in law as a result of a future review of these transfer mechanisms by European regulators or current challenges to these mechanisms in the European courts.

In addition, the United Kingdom leaving the EU could also lead to further legislative and regulatory changes. It remains unclear how the United Kingdom data protection laws or regulations will develop in the medium to longer term and how data transfer to the United Kingdom from the EU will be regulated, especially following the United Kingdom's departure from the EU on January 31, 2020 without a deal. However, the United Kingdom has transposed the GDPR into domestic law with the Data Protection Act 2018, which remains in force following the United Kingdom's departure from the EU. As of January 1, 2021, and the expiry of transitional arrangements agreed to between the United Kingdom and EU, data processing in the United Kingdom is governed by a United Kingdom version of the GDPR (combining the GDPR and the Data Protection Act 2018), exposing us to two parallel regimes, each of which potentially authorizes similar fines and other potentially divergent enforcement actions for certain violations. On June 28, 2021, the European Commission issued an adequacy decision under the GDPR which allows personal data transfers (other than those carried out for the purposes of United Kingdom immigration control) from the EEA to the United Kingdom to continue without restriction for four years (ending June 27, 2025). After that period, the adequacy decision may be renewed, only if the United Kingdom continues to ensure an adequate level of data protection. During these four years, the European Commission will continue to monitor the situation in the United Kingdom and could intervene at any point if the United Kingdom deviates from the level of data protection in place at the time of the issuance of the adequacy decision. If the adequacy decision is withdrawn or not renewed, transfers of personal data from the EEA to the United Kingdom will require a valid 'transfer mechanism' and we may be required to implement new

processes and put new agreements in place, such as standard contractual clauses, to enable transfers of personal data from the EEA to the United Kingdom to continue.

Because of the breadth of these laws and the narrowness of their exceptions and safe harbors, it is possible that our current practices could be challenged under one or more of such laws, or that we will have to modify our business practices substantially to begin operating in these areas. The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform. Federal, state and foreign enforcement bodies have increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry.

With the GDPR, CCPA, CPRA, and other laws, regulations and other obligations relating to privacy and data protection imposing new and relatively burdensome obligations, and with substantial uncertainty over the interpretation and application of these and other obligations, we may face challenges in addressing their requirements and making necessary changes to our policies and practices, and may incur significant costs and expenses in an effort to do so. Additionally, if third parties we work with, such as vendors or service providers, violate applicable laws or regulations or our policies, such violations may also put our or our customers' data at risk and could in turn have an adverse effect on our business, financial condition and results of operations. Any failure or perceived failure by us or our service providers to comply with our applicable policies or notices relating to privacy or data protection, our contractual or other obligations to third parties, or any of our other legal obligations relating to privacy or data protection, may result in governmental investigations or enforcement actions, litigation, claims and other proceedings, harm our reputation, and could result in significant liability.

We conduct business in a heavily regulated industry, and changes in regulations or violations of regulations may, directly or indirectly, reduce our revenue, adversely affect our business, financial condition and results of operations.

The diagnostic testing industry is highly regulated, and there can be no assurance that the regulatory environment in which we operate will not change significantly and adversely to us in the future. Areas of the regulatory environment that may affect our ability to conduct business include, without limitation:

- federal and state laws applicable to test ordering, documentation of tests ordered, billing practices and claims payment and/or regulatory agencies enforcing those laws and regulations;
- federal and state health care fraud and abuse laws;
- federal and state laboratory anti-mark-up laws;
- coverage and reimbursement levels by Medicare, Medicaid, other governmental payers and private insurers;
- restrictions on coverage of and reimbursement for tests;
- federal and state laws governing laboratory testing, including CLIA, and state licensing laws;
- federal and state laws and enforcement policies governing the development, use and distribution of diagnostic medical devices, including laboratory developed tests, or LDTs;
- federal and state laws and enforcement policies governing the use of AI in analyzing data, including data in healthcare related areas;
- federal, state and local laws governing the handling and disposal of medical and hazardous waste;
- federal and state Occupational Safety and Health Administration rules and regulations;
- the Health Insurance Portability and Accountability Act of 1996, or HIPAA, and similar state data privacy and security laws; and
- consumer protection laws.

In particular, the laws and regulations governing the marketing of diagnostic tests are complex, and there are often no sufficient regulatory or judicial interpretations of these laws and regulations. For example, some of our diagnostic tests are actively regulated by the FDA pursuant to the medical device provisions of the Federal Food, Drug and Cosmetic Act, or FDCA. The FDA defines a medical device to include any instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar or related article, including a component, part or accessory, intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment or prevention of disease, in man or other animals. Many of our genomic and algorithmic diagnostic tests are likely to be considered by the FDA to be medical devices. Among other things, pursuant to the FDCA and its implementing regulations, the FDA regulates the research, design, testing, manufacturing, safety, labeling, storage, recordkeeping, premarket clearance or approval, marketing and promotion and sales and distribution of medical devices in the United States to ensure that medical devices distributed domestically are safe and effective for their intended uses. In addition, the FDA regulates the import and export of medical devices. If we do not comply with these requirements or fail to adequately comply, our business, financial condition and results of operations may be harmed.

Changes in the current regulatory framework for algorithmic diagnostic products and services can impose additional regulatory burdens on us. On September 27, 2019, the FDA's Center for Devices and Radiological Health released a draft guidance on clinical decision support software to describe their planned regulatory approach for certain healthcare software functions. The FDA is also currently considering the development of novel regulatory pathways for AI technologies and other software. As the regulatory framework evolves, we may incur substantial costs to ensure compliance with new or amended laws and regulations. Failure to comply with any of these laws and regulations could result in enforcement actions against us, damage to our reputation and loss of goodwill, any of which could have a material adverse effect on our business, financial condition and results of operations.

Certain of our tests are currently marketed as LDTs, and future changes in FDA enforcement discretion for LDTs could subject our operations to much more significant regulatory requirements.

The FDA has a policy of enforcement discretion with respect to LDTs whereby the FDA does not actively enforce its regulatory requirements for such tests. However, the FDA has stated its intention to modify its enforcement discretion policy with respect to LDTs. If there are changes in FDA policy, or if the FDA disagrees that we are marketing our tests as LDTs within the scope of its policy of enforcement discretion, we may become subject to extensive regulatory requirements and may be required to stop selling our existing tests or launching any other tests we may develop and to conduct additional clinical trials or take other actions prior to continuing to market our tests. This could significantly increase the costs and expenses of conducting, or otherwise harm, our business, financial condition and results of operations. Additionally, because our Platform and other software applications we make available include functionality related to the reporting of results from the LDTs we run, the FDA could attempt to regulate the software applications, including portions of our Platform, that we utilize to provides results of the LDTs to our customers and this may require costly modifications, additional development or the reduction in functionality in our offerings which could, in turn, make them less attractive to our customers.

We market some of our tests as LDTs. While we believe that we are in material compliance with applicable laws and regulations, we cannot assure that the FDA will agree with us.

On July 31, 2014, the FDA notified Congress of its intent to modify its policy of enforcement discretion with respect to LDTs. On October 3, 2014, FDA issued two draft guidances, entitled "Framework for Regulatory Oversight of Laboratory Developed Tests (LDTs)," or the Framework Guidance, and "FDA Notification and Medical Device Reporting for Laboratory Developed Tests (LDTs)." The Framework Guidance stated that the FDA intended to modify its policy of enforcement discretion with respect to LDTs in a risk-based manner consistent with the existing classification of medical devices. Thus, pursuant to the Framework Guidance, the FDA planned to begin to enforce its medical device requirements, including premarket submission requirements, on LDTs that have historically been marketed without FDA premarket review and oversight. The FDA could ultimately modify its current approach to LDTs (including the various software components we use to prepare

and deliver the results of the LDTs) in a way that would subject our products marketed as LDTs to the enforcement of regulatory requirements. If such changes to the regulatory framework occur, we could be subject to enforcement of regulatory requirements as a device manufacturer such as registration and listing requirements, medical device reporting requirements and the requirements of the FDA's Quality System Regulation. Additionally, if the FDA begins to enforce its premarket submission regulations with respect to LDTs, we may be required to obtain premarket clearance or approval for our products we plan to commercialize as LDTs.

On September 29, 2023, the FDA released a Proposed Rule regarding "Medical Devices; Laboratory Developed Tests," through which the FDA proposes abandoning its long-standing policy of enforcement discretion of LDT's in favor of a more robust regulatory regime. If the FDA implements the proposed rule without substantial modification, it could significantly impact our operations.

There is no guarantee that the FDA will grant 510(k) clearance or a premarket approval of our products and failure to obtain necessary clearances or approvals for our products would adversely affect our ability to grow our business.

Before we begin to label and market certain of our products for use as clinical diagnostics in the United States, including as companion diagnostics, we may be required to obtain either 510(k) clearance or a premarket approval, or supplemental premarket approval, or respectively, PMA or sPMA, from the FDA, unless an exemption applies or FDA exercises its enforcement discretion and refrains from enforcing its medical device requirements. For example, the FDA has a policy of refraining from enforcing such requirements with respect to LDTs, which the FDA considers to be a type of *in vitro* diagnostic test that is designed, manufactured and used within a single laboratory. The FDA has also largely refrained from regulating pharmacogenomic tests like those we perform in our neuropsychology business. These enforcement policies could change dramatically, especially in light of the FDA's September 29, 2023 Proposed Rule regarding Laboratory Developed Tests.

The process of obtaining regulatory clearance or approval can be a rigorous, costly, lengthy and uncertain process. In the PMA process, the FDA must determine that a proposed device is safe and effective for its intended use based, in part, on extensive data, including, but not limited to, technical, pre-clinical, clinical trial, manufacturing and labeling data. In the 510(k) clearance process, the FDA must determine that a proposed device is "substantially equivalent" to a device legally on the market, known as a "predicate" device, in order to clear the proposed device for marketing. To be "substantially equivalent," the proposed device must have the same intended use as the predicate device, and either have the same technological characteristics as the predicate device or have different technological characteristics and not raise different questions of safety or effectiveness than the predicate device. Clinical data is sometimes required to support a substantial equivalence determination.

The FDA can delay, limit or deny clearance or approval of a device for many reasons, including:

- our inability to demonstrate to the satisfaction of the FDA that our products are safe or effective for their intended uses;
- the disagreement of the FDA with the design, conduct or implementation of our clinical trials or the analysis or interpretation of data from our pre-clinical studies or clinical trials;
- serious and unexpected adverse effects experienced by participants in our clinical trials;
- the data from our pre-clinical studies and clinical trials may be insufficient to support clearance or approval, where required;
- our inability to demonstrate that the clinical and other benefits of any of our tests outweigh the risks;
- an advisory committee, if convened by the FDA, may recommend against approval of our PMA or other application for any of our tests or may recommend that the FDA require, as a condition of approval, additional pre-clinical studies or clinical trials, limitations on approved labeling or distribution and use restrictions, or even if an advisory committee, if convened, makes a favorable recommendation, the FDA may still not approve the test;

- the FDA may identify deficiencies in our marketing application, and in our manufacturing processes, facilities or analytical methods or those of our third-party contract manufacturers;
- the potential for approval policies or regulations of the FDA to change significantly in a manner rendering our clinical data or regulatory filings insufficient for the clearance or approval; and
- the FDA may audit our clinical trial data and conclude that the data is not sufficiently reliable to support a PMA application.

In foreign jurisdictions, we may be required to procure similar regulatory approvals or clearances prior to marketing our diagnostic products. For example, in the Europe Union, we need to comply with the new Medical Device Regulation 2017/745 and In Vitro Diagnostic Regulation 2017/746, which became effective May 26, 2017, with application dates of May 26, 2021 (postponed from 2020) and May 26, 2022, respectively. Obtaining the requisite regulatory approvals or clearances in foreign jurisdictions can be expensive and may involve considerable delay.

Any delay or failure to obtain necessary regulatory approvals or clearances would have a material adverse effect on our business, financial condition and results of operations.

Modifications to our FDA-cleared or approved products may require new 510(k) clearances or premarket approvals, or may require us to cease marketing or recall the modified products until clearances are obtained.

For any product approved pursuant to a PMA, we are required to seek supplemental approval for many types of changes to the approved product, for which we will need to determine whether a PMA supplement or other regulatory filing is needed or whether the change may be reported via the PMA Annual Report. Similarly, any modification to a 510(k)-cleared device that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, design, or manufacture, requires new 510(k) clearance or, possibly, approval of a new PMA. If the FDA requires us to seek approvals or clearances for modifications to our previously approved or cleared products, for which we concluded that new approvals or clearances are unnecessary, we may be required to cease marketing or distribution of our products or to recall the modified product until we obtain the approval or clearance, and we may be subject to significant regulatory fines or penalties.

Our products may in the future be subject to product recalls. A recall of our products, either voluntarily or at the direction of the FDA or another governmental authority, or the discovery of serious safety issues with our products, could have a significant adverse impact on us.

The FDA and international regulatory bodies have the authority to require the recall of commercialized products that are subject to FDA regulation in the event of material deficiencies or defects in design or manufacture. We may also, on our own initiative, recall a product. The FDA, for example, requires that certain classifications of recalls be reported to the FDA within ten working days after the recall is initiated. In the case of FDA-approved tests, a government-mandated or voluntary recall by us or one of our distributors could occur as a result of an unacceptable risk to health, component failures, malfunctions, manufacturing errors, design or labeling defects or other deficiencies and issues. Recalls of any of our products could impair our ability to produce our products in a cost-effective and timely manner, which would have an adverse effect on our reputation, business, financial condition and results of operations. We may be subject to liability claims, may be required to bear costs or may take other actions that may have a negative impact on our future sales and our ability to generate profits. We may initiate voluntary recalls involving our products in the future that we determine do not require notification to the FDA. If the FDA disagrees with our determinations, the FDA could require us to report those actions and take enforcement action for failing to report the recalls when they were conducted. A future recall announcement could harm our reputation with customers and negatively affect our business, financial condition and results of operations.

If we initiate a correction or removal for one of our tests, issue a safety alert or undertake a field action or recall to reduce a risk to health imposed by the test, this could lead to increased scrutiny by the FDA and our

customers regarding the quality and safety of our tests and to negative publicity, including FDA alerts, press releases or administrative or judicial actions. Furthermore, circulation of any such negative publicity could harm our reputation, be used by competitors against us in competitive situations and cause customers to delay purchase decisions or cancel orders.

Arterys, Inc., a company we acquired in 2022, has developed several medical devices that are regulated by the FDA and its European equivalents. Arterys also distributes devices developed by third parties. If we identify an issue with, or propose changes to, one of these devices that impacts patient safety or causes us to undertake a field action or implement a recall, our business operations and reputation could be harmed in a meaningful way.

Our "research use only" and any potential "investigational use only" products could become subject to more onerous regulation by the FDA or other regulatory agencies in the future, which could increase our costs and delay our commercialization efforts, thereby materially and adversely affecting our business, financial condition and results of operations.

In the United States, some of our products are currently available, or may become available, for research use only, or RUO, or for investigational use only, or IUO, depending on the proposed application. We make our RUO and IUO products available to a variety of parties, including pharmaceutical and biotechnology companies and research institutes. Because RUO and IUO products are not intended for use in clinical practice and cannot be advertised or promoted for clinical or diagnostic claims, they are exempt from many regulatory requirements otherwise applicable to medical devices. In particular, while the FDA regulations require that RUO products be labeled "For Research Use Only. Not for use in diagnostic procedures," and that IUO products be labeled "For Investigational Use Only. The performance characteristics of this product have not been established," such products are not subject to the FDA's pre- and post-market controls for medical devices.

A significant change in the laws governing RUO or IUO products or how they are enforced may require us to change our business model in order to maintain compliance. For instance, in November 2013 the FDA issued a guidance document entitled "Distribution of In Vitro Diagnostic Products Labeled for Research Use Only or Investigational Use Only," or the RUO/IUO Guidance, which highlights the FDA's interpretation that distribution of RUO or IUO products with any labeling, advertising or promotion that suggests that clinical laboratories can validate the test through their own procedures and subsequently offer it for clinical diagnostic use as an LDT is in conflict with the RUO or IUO status. The RUO/IUO Guidance further articulates the FDA's position that any assistance offered in performing clinical validation or verification, or similar specialized technical support, to clinical laboratories, is in conflict with RUO or IUO status. If we engage in any activities that the FDA deems to be in conflict with the RUO or IUO status held by any of our products so labeled, we may be subject to immediate, severe and broad FDA enforcement action that would adversely affect our ability to continue operations. Accordingly, if the FDA finds that we are distributing our RUO or IUO products in a manner that is inconsistent with its RUO/IUO Guidance, we may be forced to stop distribution of our RUO/IUO tests until we are in compliance, which would reduce our revenue, increase our costs and adversely affect our business, financial condition and results of operations.

Even if we receive regulatory approval of our products, we will continue to be subject to extensive regulatory oversight.

Medical devices are subject to extensive regulation by the FDA in the United States, the European Commission, European Economic Area, or EEA, Competent Authorities, and comparable regulatory agencies in other territories where we do or may do business. If any of our products are approved by the FDA, the European Commission, EEA Competent Authorities, or other comparable foreign regulatory agencies, we will be required to timely file various reports. If these reports are not filed timely, regulators may impose sanctions and sales of our products may suffer, and we may be subject to product liability or regulatory enforcement actions, all of which could harm our business, financial condition and results of operations. In addition, as a condition of approving a PMA application, the FDA may also require some form of post-approval study or post-market surveillance, whereby the applicant conducts a follow-up study or follows certain patient groups for a number of

years and makes periodic reports to the FDA on the clinical status of those patients when necessary to protect the public health or to provide additional safety and effectiveness data for the device. The product labeling must be updated and submitted in a PMA supplement as results, including any adverse event data from the post-approval study, become available. Failure to conduct or timely complete post-approval studies in compliance with applicable regulations, update the product labeling, or comply with other post-approval requirements could result in withdrawal of approval of the PMA, which would harm our business, financial condition and results of operations.

The FDA and the Federal Trade Commission, or FTC, also regulate the advertising and promotion of medical devices to ensure that their promotional claims made are consistent with the applicable marketing authorizations, that there are adequate and reasonable data to substantiate the claims, and that the promotional labeling and advertising is neither false nor misleading in any respect. If the FDA or FTC determines that any of our promotional claims are false, misleading, not substantiated or not permissible, we may be subject to enforcement actions and we may be required to revise our promotional claims and make other corrections or restitutions.

The FDA, state and foreign authorities have broad enforcement powers. Our failure to comply with applicable regulatory requirements could result in enforcement action by the FDA, state or foreign regulatory agencies, which may include any of the following sanctions:

- adverse publicity, warning letters, untitled letters, fines, injunctions, consent decrees and civil penalties;
- repair, replacement, refunds, recalls, termination of distribution, administrative detention or seizures of our products;
- operating restrictions, partial suspension or total shutdown of production;
- customer notifications or repair, replacement or refunds;
- refusing our requests for clearances or approvals of new products, new intended uses or modifications to existing products;
- withdrawals of current clearances or approvals, resulting in prohibitions on sales of our products;
- refusal to issue certificates needed to export products for sale in other countries; and
- criminal prosecution.

Any of these sanctions could also result in higher than anticipated costs or lower than anticipated sales of our products and have a material adverse effect on our business, financial condition and results of operations.

In addition, the FDA may change its clearance and approval policies, adopt additional regulations or revise existing regulations, or take other actions which may prevent or delay approval or clearance of our current or future products under development. For example, in November 2018, FDA officials announced forthcoming steps that the FDA intends to take to modernize the premarket notification pathway under Section 510(k) of the FDCA.

Among other things, the FDA announced that it planned to develop proposals to drive manufacturers utilizing the 510(k) pathway toward the use of newer predicates. These proposals included plans to potentially sunset certain older devices that were used as predicates under the 510(k) clearance pathway, and to potentially publish a list of devices that have been cleared on the basis of demonstrated substantial equivalence to predicate devices that are more than 10 years old. In May 2019, the FDA solicited public feedback on these proposals. The FDA requested public feedback on whether it should consider certain actions that might require new authority, such as whether to sunset certain older devices that were used as predicates under the 510(k) clearance pathway. These proposals have not yet been finalized or adopted, and the FDA may work with Congress to implement such proposals through legislation. Accordingly, it is unclear the extent to which any proposals, if adopted, could

impose additional regulatory requirements on us that could delay our ability to obtain new 510(k) clearances, increase the costs of compliance, or restrict our ability to maintain our current clearances, or otherwise create competition that may negatively affect our business, financial condition and results of operations.

The FDA may establish performance criteria for classes of devices for which we or our competitors seek or currently have received clearance, and it is unclear the extent to which such performance standards, if established, could impact our ability to obtain new 510(k) clearances or otherwise create competition that may negatively affect our business, financial condition and results of operations.

Any new statutes, regulations or revisions or reinterpretations of existing regulations may impose additional costs or lengthen review times of our current or future products or make it more difficult to obtain clearance or approval for, manufacture, market or distribute our products.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be promulgated that could prevent, limit or delay regulatory clearance or approval of our diagnostic tests.

We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad.

We may never obtain approval in foreign jurisdictions for any of our products and, even if we do, we may never be able to commercialize them in any other jurisdiction, which would limit our ability to realize their full market potential.

In order to eventually market any of our current or future products in any particular foreign jurisdiction, we must comply with numerous and varying regulatory requirements on a jurisdiction-by-jurisdiction basis regarding quality, safety, data privacy, performance and efficacy. In addition, products offered in one country may not be accepted by regulatory authorities in other countries. Approval processes vary among countries and can involve additional product testing and validation and additional administrative review periods.

Seeking foreign regulatory clearance, authorization or approval could result in difficulties and costs for us and require additional studies, trials or investigations which could be costly and time-consuming. Regulatory requirements and ethical approval obligations can vary widely from country to country and could delay or prevent the introduction of our products in those countries. If we or our collaborators fail to comply with regulatory requirements in international markets or to obtain and maintain required regulatory clearances, authorizations or approvals in international markets, or if those approvals are delayed, our target market will be reduced and our ability to realize the full market potential of our products will be unrealized.

Failure to comply with federal, state and foreign laboratory licensing requirements and the applicable requirements of the FDA or any other regulatory authority, could cause us to lose the ability to perform our tests, experience disruptions to our business, or become subject to administrative or judicial sanctions.

We are subject to CLIA, a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. CLIA regulations establish specific standards with respect to personnel qualifications, facility administration, proficiency testing, quality control, quality assurance and inspections. Any testing subject to CLIA regulation must be performed in a CLIA certified laboratory. CLIA certification is also required in order for us to be eligible to bill state and federal healthcare programs, as well as commercial payers, for our tests. We have a current CLIA certificate to perform our tests at our laboratories in Chicago, Illinois, Atlanta, Georgia and Raleigh, North Carolina. To maintain this certificate, we are subject to survey and inspection every two years. Moreover, CLIA inspectors may make random inspections of our laboratory from time to time.

We are also required to maintain clinical laboratory licenses to perform testing in Illinois, Georgia, and North Carolina. State laboratory laws establish standards for day-to-day operation of our clinical laboratories, including the training and skills required of personnel and quality control. In addition, some other states require

our laboratories to be licensed in the state in order to test specimens from those states. In addition to Illinois and Georgia, our laboratories are licensed in California, Rhode Island, Pennsylvania, New York and Maryland. Although we have obtained licenses from states where we believe we are required to be licensed, it is possible that other states we are not aware of currently require out-of-state laboratories to obtain licensure in order to test specimens from the state, and that other states may adopt similar requirements in the future.

We may also be subject to regulations in foreign jurisdictions as we seek to expand international utilization of our tests or as such jurisdictions adopt new licensure requirements, which may require review of our tests in order to offer them or may have other limitations such as restrictions on the transport of specimens necessary for us to perform our tests that may limit our ability to make our tests available outside of the United States. Complying with licensure requirements in new jurisdictions may be expensive, time-consuming and subject us to significant and unanticipated delays.

Failure to comply with applicable clinical laboratory licensure requirements may result in a range of enforcement actions, including suspension, limitation or revocation of our CLIA certificate and/or state licenses, imposition of a directed plan of action, on-site monitoring, civil monetary penalties, criminal sanctions, inability to receive reimbursement from Medicare, Medicaid and commercial payers, as well as significant adverse publicity. Any sanction imposed under CLIA, its implementing regulations, or state or foreign laws or regulations governing clinical laboratory licensure or our failure to renew our CLIA certificate, a state or foreign license or accreditation, could have a material adverse effect on our business, financial condition and results of operations. Even if we were able to bring our laboratory back into compliance, we could incur significant expenses and potentially lose revenue in doing so.

In order to test specimens from New York, LDTs must be approved by the New York State Department of Health, or NYSDOH, on a product-by-product basis before they are offered, and versions of our xT and xF tests have been approved by NYSDOH. We will need to seek NYSDOH approval of any future LDTs we develop, or for modifications to our existing LDTs, and want to offer for clinical testing to New York residents, and there can be no assurance that we will be able to obtain such approval. As a result, we are subject to periodic inspection by the NYSDOH and are required to demonstrate ongoing compliance with NYSDOH regulations and standards. To the extent NYSDOH identifies any non-compliance and we are unable to implement satisfactory corrective actions to remedy such non-compliance, the State of New York could withdraw approval for our tests.

The College of American Pathologists, or CAP, maintains a clinical laboratory accreditation program. While not required to operate a CLIA-certified laboratory, many private insurers require CAP accreditation as a condition to contracting with clinical laboratories to cover their tests. In addition, some countries outside the United States require CAP accreditation as a condition to permitting clinical laboratories to test samples taken from their citizens. We have obtained CAP accreditation for our Chicago and Atlanta laboratories, and we expect to receive CAP accreditation for our Raleigh, North Carolina laboratory. In order to maintain CAP accreditation, we are subject to survey for compliance with CAP standards every two years. Failure to maintain CAP accreditation could have a material adverse effect on the sales of our tests and the results of our operations.

We are subject to numerous federal and state healthcare statutes and regulations; complying with such laws pertaining to our business is an expensive and time-consuming process, and any failure to comply could result in substantial penalties and a material adverse effect to our business, financial condition and results of operations.

Our operations are subject to other extensive federal, state, local and foreign laws and regulations, all of which are subject to change. These laws and regulations may include, among others:

- the federal Anti-Kickback Statute, or AKS, which prohibits knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, overtly or covertly, in cash or in kind (e.g. provision of free or discounted goods, services or items), in return for or to induce such person to refer an individual, or to purchase, lease, order, arrange for or recommend purchasing, leasing or ordering,

any good, facility, item or service that is reimbursable, in whole or in part, under a federal healthcare program. The term ‘‘remuneration’’ has been broadly interpreted to include anything of value, such as phlebotomy kits. Although there are a number of statutory exceptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exceptions and safe harbors are drawn narrowly, and practices that involve remuneration that are alleged to be intended to induce referrals, purchases or recommendations of covered items or services may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct *per se* illegal under the AKS. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all its facts and circumstances. Several courts have held that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the AKS has been violated. Moreover, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. Violations are subject to significant civil monetary penalties, plus up to three times the remuneration involved. Violations of the AKS may also result in criminal penalties, including additional fines and imprisonment of up to ten years, and exclusion from Medicare, Medicaid or other governmental healthcare programs;

- the Eliminating Kickbacks in Recovery Act of 2018, or EKRA, which prohibits knowingly and willfully soliciting or receiving any remuneration (including any kickback, bribe or rebate) directly or indirectly, overtly or covertly, in cash or in kind, in return for referring a patient or patronage to a laboratory; or paying or offering any remuneration (including any kickback, bribe or rebate) directly or indirectly, overtly or covertly, in cash or in kind, to induce a referral of an individual to a laboratory or in exchange for an individual using the services of that laboratory. EKRA was enacted to help reduce opioid-related fraud and abuse. However, EKRA defines the term “laboratory” broadly and without reference to any connection to substance use disorder treatment. The EKRA applies to all payers including commercial payers and government payers. Violations of EKRA are subject to significant fines and/or up to 10 years in jail, separate and apart from existing AKS regulations and penalties. The law includes a limited number of exceptions, some of which closely align with corresponding AKS exceptions and safe harbors, and others that materially differ. Currently, there is no regulation interpreting or implementing EKRA, nor any guidance released by a federal agency regarding the scope of EKRA. Accordingly, we cannot guarantee that our relationships with providers, sales representatives, or customers will not be subject to scrutiny or will withstand regulatory challenge under EKRA;
- the Stark Law, which prohibits a physician from making a referral for certain designated health services covered by the Medicare or Medicaid program, including laboratory and pathology services, if the physician or an immediate family member of the physician has a financial relationship with the entity providing the designated health services and prohibits that entity from billing, presenting or causing to be presented a claim for the designated health services furnished pursuant to the prohibited referral, unless an exception applies. Sanctions for violating the Stark Law include denial of payment, significant civil monetary penalties (on a per claim basis and additional penalties for a circumvention scheme), and exclusion from the federal healthcare programs;
- the federal Civil Monetary Penalties Law, which prohibits, among other things, the offering or transfer of remuneration to a Medicare or state healthcare program beneficiary if the person knows or should know it is likely to influence the beneficiary’s selection of a particular provider, practitioner or supplier of services reimbursable by Medicare or a state healthcare program, unless an exception applies. Violations can result in significant civil monetary penalties for each wrongful act;
- federal and state “Anti-Markup” rules, which, among other things, typically prohibit a physician or supplier billing for clinical or diagnostic tests (with certain exceptions) from marking up the price of a purchased test performed by another physician or supplier that does not “share a practice” with the billing physician or supplier;

- the federal Physician Payments Sunshine Act, which requires certain manufacturers of drugs, biologicals, and kits, medical devices or supplies that require premarket approval by or notification to the FDA, and for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program to report annually to CMS, information related to (i) payments and other transfers of value to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), other healthcare professionals (such as physician assistants and nurse practitioners), and teaching hospitals; and (ii) ownership and investment interests in such manufacturers held by physicians and their immediate family members. Failure to submit required information may result in significant civil monetary penalties for any payments, transfers of value or ownership or investment interests that are not timely, accurately, and completely reported in an annual submission, and may result in liability under other federal laws or regulations;
- the federal government may bring a lawsuit under the False Claims Act, or the FCA, against any party whom it believes has knowingly or recklessly presented, or caused to be presented, a false or fraudulent request for payment from the federal government, or who has made a false statement or used a false record to get a claim for payment approved. The federal government and a number of courts have taken the position that claims presented in violation of certain other statutes, including the AKS or the Stark Law, can also be considered a violation of the FCA based on the theory that a provider impliedly certifies compliance with all applicable laws, regulations, and other rules when submitting claims for reimbursement. An FCA violation may provide the basis for the imposition of administrative penalties as well as exclusion from participation in governmental healthcare programs, including Medicare and Medicaid. A number of states including California have enacted laws that are similar to the federal FCA. Private individuals can bring FCA "*qui tam*" actions, on behalf of the government and such individuals, commonly known as "whistleblowers," may share in amounts paid by the entity to the government in fines or settlement. When an entity is determined to have violated the FCA, the government may impose civil fines and penalties for each false claim, plus treble damages, and exclude the entity from participation in federal healthcare programs;
- the HIPAA fraud and abuse provisions, which created federal criminal statutes that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private insurers, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- HIPAA, as amended by HITECH, and their respective implementing regulations, which impose obligations on covered entities, including certain healthcare providers, health plans, and healthcare clearinghouses, as well as their respective business associates that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity, with respect to safeguarding the privacy, security and transmission of individually identifiable health information, and their covered subcontractors;
- federal and state laws related to, among other things, unlawful schemes to defraud, excessive fees for services, unlawful trade practices, insurance fraud, kickbacks, patient inducement and statutory or common law fraud restrict the provision of products, services or items for free or at reduced charge to government or non-government healthcare program beneficiaries. These laws and regulations relating to the provision of items or services for free are complex and are subject to interpretation by the courts and by government agencies;
- other federal and state fraud and abuse laws, such as state anti-kickback, self-referrals, false claims and anti-markup laws, any of which may extend to services reimbursable by any payer, including private insurers;
- state laws that prohibit other specified practices, such as billing physicians for tests that they order; providing tests at no or discounted cost to induce adoption; waiving co-insurance, co-payments,

deductibles or other amounts owed by patients; billing a state healthcare program at a price that is higher than what is charged to other payers; or employing, exercising control over or splitting fees with licensed medical professionals; and

- similar foreign laws and regulations in the countries in which we operate or may operate in the future.

As a clinical laboratory, our business practices may face additional scrutiny from various government agencies such as the Department of Justice, the U.S. Department of Health and Human Services Office of Inspector General, or OIG, and CMS. Certain arrangements between clinical laboratories and referring physicians have been identified in fraud alerts issued by the OIG as implicating the AKS. The OIG has stated that it is particularly concerned about these types of arrangements because the choice of laboratory and the decision to order laboratory tests typically are made or strongly influenced by the physician, with little or no patient input. Moreover, the provision of payments or other items of value by a clinical laboratory to a referral source could be prohibited under the Stark Law unless the arrangement meets all criteria of an exception. The government has been active in enforcement of these laws against clinical laboratories.

Numerous states have enacted laws prohibiting business corporations, such as us, from practicing medicine and from employing or engaging physicians and other medical professionals (generally referred to as the prohibition against the corporate practice of medicine), which could include physician laboratory directors. These laws are designed to prevent interference in the medical decision-making process by anyone who is not a licensed medical professional. For example, the medical boards of certain states have indicated that determining the appropriate diagnostic tests for a particular condition and taking responsibility for the ultimate overall care of a patient, including making treatment options available to the patient, would constitute the unlicensed practice of medicine if performed by an unlicensed person. Violation of these laws may result in sanctions and civil or criminal penalties. It is possible that governmental authorities may conclude that our business practices, including our consulting and advisory board arrangements with physicians and other healthcare providers, a small number of whom may receive stock or stock options as compensation for services provided, do not comply with current or future corporate practice of medicine statutes, regulations, agency guidance or case law.

The growth and international expansion of our business may increase the potential of violating applicable laws and regulations. The risk is further increased by the fact that many such laws and regulations have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Efforts to ensure that our internal operations and business arrangements with third parties comply with applicable laws and regulations will involve substantial costs. Any action brought against us for violation of these or other laws or regulations, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Any of the foregoing consequences could seriously harm our business, financial condition and results of operations. To the extent our business operations are found to be in violation of any of these laws or regulations, we may be subject to significant civil, criminal and administrative penalties, including, without limitation, damages, monetary fines, individual imprisonment, disgorgement of profits, possible exclusion from participation in Medicare, Medicaid and other healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, additional reporting or oversight obligations if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with the law and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and pursue our strategy. If any of the healthcare providers or other parties with whom we interact or may interact in the future, are found not to be in compliance with applicable laws and regulations, they may be subject to criminal, civil or administrative sanctions, including exclusions from participation in various healthcare programs, which could also negatively affect our business, financial condition and results of operations.

We have received requests for medical records and billing information from certain Unified Program Integrity Contractors, or UPICs, regarding clinical diagnostic services provided by Tempus to patients enrolled in the Medicare and Medicaid programs. Federal and state governments continue to pursue enforcement policies resulting in a significant number of investigations, inspections, audits, citations of regulatory deficiencies, and other regulatory sanctions including demands for refund of overpayments, terminations from the Medicare and

Medicaid programs, bans on Medicare and Medicaid payments for new admissions, and civil monetary penalties or criminal penalties. These policies may impact our business. For example, on May 19, 2022, Tempus received a subpoena from the Office of the Ohio Attorney General. The subpoena required production of certain billing and patient records associated with nine Ohio Medicaid patients who received Tempus clinical diagnostic tests between 2019 and 2022. Tempus provided responsive documents in June 2022 and has not received any additional inquiry since that time. In addition, we expect audits under the CMS Recovery Audit Contractor, or RAC, program, the CMS Targeted Probe and Educate, or TPE, program, the UPIC program and other federal and state audits evaluating the medical necessity of services to further intensify the regulatory environment surrounding the healthcare industry as third-party firms engaged by CMS and others conduct extensive reviews of Tempus' claims data and medical and other records to identify improper payments to healthcare providers under the Medicare and Medicaid programs. If we fail to comply with the extensive laws, regulations and prohibitions applicable to our businesses, we could become ineligible to receive government program reimbursement, suffer civil or criminal penalties, or be required to make significant changes to our operations and refund certain payments we have received. In addition, we could be forced to expend considerable resources responding to investigations, audits or other enforcement actions related to these laws, regulations or prohibitions.

Our status as both a healthcare company and a technology company presents unique complexities when attempting to comply with these myriad laws and regulations. For example, certain data services we provide as a technology company may result in compensating other healthcare providers for access to data or the right to commercialize de-identified data. While such services, standing alone, appear routine, the compliance issues become more complex when considering our status as a healthcare provider that performs clinical diagnostic testing on behalf of healthcare providers. We have implemented programs to ensure we comply with all applicable laws and regulations notwithstanding these complexities; however, we cannot guarantee we will be successful in doing so, or that government enforcement agencies will agree that our efforts have been sufficient. Accordingly, we may be subject to enforcement actions that could materially impact our reputation, operations, and results.

If the validity of an informed consent from patients regarding our tests was challenged, we could be forced to stop offering our products or using our resources, and our business, financial condition and results of operations could be negatively affected.

We seek to ensure that all data and biological samples that we receive have been collected from patients, subjects or participants who have provided the necessary informed consent for purposes that extend to our development activities. In many instances, our ability to obtain these consents requires the physician or hospital system ordering the diagnostic system to obtain the consent of the patient and to attest that they have done so on our requisition forms. We also have certain relationships where data and samples, and certain data licensed to us by third parties, are provided to us in a de-identified manner. The collection and analysis of data and samples in many different jurisdictions results in complex legal questions regarding the adequacy of informed consent and the status of genetic material. Therefore, with respect to data and samples received from our customers, we rely on physicians and hospital systems to comply, and with regard to data received from our suppliers, we rely on these third parties to comply, with the informed consent requirements and with applicable local law regarding informed consent. The subject's informed consent obtained in any particular jurisdiction could be challenged in the future, and that consent could prove invalid, unlawful or otherwise inadequate for our purposes. Any findings against us, or our customers or suppliers, could deny us access to or force us to stop using some of our data and clinical samples, which would hinder our product development efforts, potentially involve us in costly and prolonged litigation, result in reputational harm and adversely affect our business, financial condition and results of operations.

We may be subject to fines, penalties, licensure requirements, or legal liability, if it is determined that through our test reports we are practicing medicine without a license.

Many of our test reports delivered to physicians provide information regarding therapies and clinical trials that physicians may use in making treatment decisions for their patients and certain other reports provide

pharmacogenomic information. We make members of our organization available to discuss the information provided in the reports. Certain state laws prohibit the practice of medicine without a license. Our customer service representatives and medical affairs team provide support to our customers, including assistance in interpreting the test report results. A governmental authority or other parties could allege that the identification of available therapies and clinical trials in our reports and the related customer service we provide constitute the practice of medicine. A state may seek to have us discontinue the inclusion of certain aspects of our test reports or the related services we provide, or subject us to fines, penalties, or licensure requirements. Any determination that we are practicing medicine without a license may result in significant liability to us, and our business, financial condition and results of operations would be harmed.

Our billing and claim processing are complex and time-consuming, and any delay in submitting claims or failure to comply with applicable billing requirements could hinder collection and have an adverse effect on our revenue.

Billing for our diagnostic tests is complex, time-consuming and expensive. Depending on the billing arrangement and applicable law, we bill various payers, such as Medicare, Medicaid, health plans, insurance companies, hospital systems, providers, and patients, all of which may have different billing requirements. Several factors make the billing process complex, including:

- differences between the list prices for our test, the reimbursement rates of payers, the amounts we charge healthcare institutions directly, and the cost to patients who pay for our tests out-of-pocket;
- compliance with complex federal and state regulations related to billing government healthcare programs, including Medicare and Medicaid, to the extent our tests are covered by such programs;
- differences in coverage among payers and the effect of patient co-payments or co-insurance;
- differences in information, pre-authorization and other billing requirements among payers;
- changes to codes and coding instructions governing our tests;
- incorrect or missing billing information; and
- the resources required to manage the billing and claim appeals process.

These billing complexities and the related uncertainty in obtaining payment for our tests could negatively affect our revenue and cash flow, our ability to achieve profitability and the consistency and comparability of our results of operations. In addition, if claims for our tests are not submitted to payers on a timely basis, or if we fail to comply with applicable billing requirements, it could have an adverse effect on our business, financial condition and results of operations.

In addition, the coding procedure used by third-party payers to identify various procedures, including our tests, during the billing process is complex, does not adapt well to our tests and may not enable coverage and adequate reimbursement rates. Third-party payers usually require us to identify the test for which we are seeking reimbursement using a CPT code. CPT coding plays a significant role in how our diagnostic tests are reimbursed both from commercial and governmental payers. For example, no CPT code comprehensively describes our NGS oncology tests. In the past, we submitted claims using individual codes or combinations of codes based on the cancer subtype profiled. Over time, in response to guidance from payers and our local MAC, we transitioned from using individual gene codes, or combinations of individual gene codes, to using “panel” CPT codes. We may soon update our approach again with the proposed adoption of even newer codes that are potentially applicable to comprehensive genomic profiling tests like the ones we offer. Despite our diligence in developing a comprehensive billing strategy that accurately describes the tests we provide, payers, such as the Local MACs, have in the past and may in the future disagree with our CPT code selection and instruct us to submit our claims using a different designated CPT code. Any disputes over appropriate coding, or requirements that we submit claims under codes with lower reimbursement rates, may materially adversely affect our business financial condition and results of operations,

Use of coding for billing our products that does not describe a specific test, requires the claim to be examined to determine what test was provided, whether the test was appropriate and medically necessary, and whether payment should be rendered, which may require a letter of medical necessity from the ordering physician. This process has in the past and may in the future result in a delay in processing the claim, a lower reimbursement amount or denial of the claim. For example, we continue to appeal the denials of certain of our NGS oncology tests by the Local MAC. Because billing third-party payers for our tests is an unpredictable, challenging, time-consuming and costly process, we may face long collection cycles and the risk that we may never collect at all, either of which could adversely affect our business, financial condition and results of operations, and we may have to increase collection efforts and incur additional costs.

Because next generation genomic sequencing is a rapidly evolving area of medicine, and because clinical treatment guidelines continue to develop, any changes to, or interpretations of, applicable billing and coding guidance, rules, policies, and procedures may impact our business. Tempus offers multiple diagnostic tests, which enable ordering healthcare providers to sequence both a cancer patient's tissue and blood. Healthcare providers may order multiple tests, either concurrently or longitudinally, even when those distinct tests cover similar genes. Similarly, when a treating healthcare provider orders our tissue-based test, we can provide, and historically have provided when available, distinct test results for DNA and RNA. Effective January 1, 2023, we began billing these tests under separate codes based on American Medical Association guidance and the National Correct Coding Initiative Manual Provider instructions. As of September 30, 2023, approximately 50% of the liquid biopsy tests we provide are ordered in proximity to a solid tissue-based test, and over 85% of our solid tissue-based tests include both RNA and DNA results. In each case, while the ordering physician attests to each distinct test's medical necessity, there is no guarantee that our retrospective or prospective billing practices will not be challenged or reversed, such as by a demand for repayment, recoupment, or prospective billing policies. Any such attempts could adversely affect our results and operations.

Changes in healthcare laws, regulations and policies could increase our costs, decrease our sales and revenues and negatively impact reimbursement for our tests.

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or the ACA, became law. This law substantially changed the way health care is financed by both commercial payers and government payers, and significantly impacted our industry. The ACA contains a number of provisions that impacted existing state and federal healthcare programs or result in the development of new programs, including those governing enrollments in state and federal healthcare programs, reimbursement changes and fraud and abuse. Our business, financial condition and results of operations have been and will continue to be affected by the ACA, including in ways we cannot currently predict.

Since its enactment, there have been efforts to repeal all or part of the ACA. For example, on June 17, 2021 the U.S. Supreme Court dismissed a challenge on procedural grounds that argued the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress. Further, prior to the U.S. Supreme Court ruling on January 28, 2021, President Biden issued an executive order that initiated a special enrollment period for purposes of obtaining health insurance coverage through the ACA marketplace, which began on February 15, 2021 and remained open through August 15, 2021. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is possible that other challenges to the ACA will be made in the future. Further, on August 16, 2022, President Biden signed the Inflation Reduction Act of 2022, or IRA, into law, which among other things extends enhanced subsidies for individuals purchasing health insurance coverage in the ACA marketplaces through plan year 2025. The IRA also eliminates the "donut hole" under the Medicare Part D program beginning in 2025 by significantly lowering the beneficiary maximum out-of-pocket cost and establishing a new manufacturer discount program. It is unclear how any additional healthcare reform measures of the Biden administration will impact the ACA and our business.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. On August 2, 2011, the Budget Control Act of 2011 was signed into law, which, among other things, reduced Medicare payments to providers by 2% per fiscal year, effective on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2032.

We anticipate there will continue to be proposals by legislators at both the federal and state levels, regulators and commercial and government payers to reduce healthcare costs while expanding individual healthcare benefits. Certain of these changes could impose additional limitations on the prices we will be able to charge for our tests, the coverage of, or the amounts of reimbursement available for our tests from commercial and government payers.

We face risks related to handling of hazardous materials and other regulations governing environmental safety.

Our operations are subject to complex and stringent environmental, health, safety and other governmental laws and regulations that both public officials and private individuals may seek to enforce. Our activities that are subject to these regulations include, among other things, our use of hazardous materials in manufacturing and in our products, and the generation, transportation and storage of waste. We could discover that we or our suppliers are not in material compliance with these regulations. Existing laws and regulations may also be revised or reinterpreted, or new laws and regulations may become applicable to us, whether retroactively or prospectively, that may have a negative effect on our business, financial condition and results of operations. It is also impossible to eliminate completely the risk of accidental environmental contamination or injury to individuals. In such an event, we could be liable for any damages that result, which could adversely affect our business, financial condition and results of operations.

Risks Related to Our Intellectual Property

If we are unable to obtain, maintain and enforce sufficient intellectual property protection for our Platform and products, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors or other third parties could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be impaired.

We rely on patent protection as well as trademark, copyright, trade secret and other intellectual property rights protection and contractual restrictions to protect our Platform, products and other proprietary technologies, all of which provide limited protection and may not adequately protect our rights or permit us to gain or keep any competitive advantage. If we fail to protect our intellectual property, third parties may be able to compete more effectively against us. In addition, we have incurred and may continue to incur substantial litigation costs in our attempts to recover or restrict use of our intellectual property.

To the extent our intellectual property offers inadequate protection, or is found to be invalid or unenforceable, we would be exposed to a greater risk of direct competition. If our intellectual property does not provide adequate coverage of our competitors' products, our competitive position could be adversely affected, as could our business, financial condition and results of operations. Both the patent application process and the process of managing patent disputes can be time-consuming and expensive. Our pending and future owned and licensed patent applications may not result in patents being issued which protect our technology, effectively prevent others from commercializing competitive technologies or otherwise provide any competitive advantage. In fact, patent applications may not issue as patents at all. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance.

As is the case with other biotechnology companies, our success depends in part on our ability to obtain and maintain protection of the intellectual property we own solely and may own jointly with others or we have licensed and may continue to license from others, particularly patents, in the United States and other countries with respect to our products and technologies. We apply for patents covering our products and technologies and uses thereof, as we deem appropriate. However, obtaining and enforcing patents, and specifically biotechnology

patents, is costly, time-consuming and complex, and we may fail to apply for patents on important products, services and technologies in a timely fashion or at all, or we may fail to apply for patents in potentially relevant jurisdictions. We may not be able to obtain or maintain patent applications and patents due to the subject matter claimed in such patent applications and patents being in disclosures in the public domain. In some cases, the inventions we attempt to patent may have been previously discovered by others and entered the public domain, which may preclude our ability to obtain patent protection for such inventions. We may not be able to file and prosecute all necessary or desirable patent applications, or maintain, enforce and license any patents that may issue from such patent applications, at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Although we enter into nondisclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties, any of these parties may breach these agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection. Moreover, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the rights to patents licensed to us. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

We own or license numerous U.S. patents and pending U.S. patent applications, with international counterparts in certain countries. It is possible that our or our licensors' pending patent applications will not result in issued patents in a timely fashion or at all, and even if patents are granted, they may not provide a basis for intellectual property protection of commercially viable products or services, may not provide us with any competitive advantages, or may be challenged and invalidated by third parties. It is possible that others will design around our current or future patented technologies to circumvent our owned or licensed patents by developing similar or alternative technologies or therapeutics in a non-infringing manner. If the patent protection provided by the patents and patent applications we own or license is not sufficiently broad to impede such competition, our ability to successfully commercialize our products could be negatively affected, which could have a material adverse effect on our business, financial condition and results of operations. Some of our patent rights may be challenged in the future, including at the United States Patent and Trademark Office, or USPTO, in post-grant proceedings, at the European Patent Office, or EPO, in opposition proceedings. We may not be successful in defending any such challenges made against our owned or licensed patents or patent applications. Any successful third-party challenge to such patent rights could result in their unenforceability or invalidity and increased competition to our business. We have challenged and may choose to challenge the patents or patent applications of third parties. The outcome of patent litigation or other proceeding can be uncertain, and any attempt by us to enforce our patent rights against others or to challenge the patent rights of others may not be successful, or, if successful, may take substantial time and result in substantial cost, and may divert our efforts and attention from other aspects of our business.

The patent positions of life sciences companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. As a result, the issuance, scope, validity, enforceability and commercial value of any patent rights are highly uncertain. No consistent policy regarding the breadth of claims allowed in such companies' patents has emerged to date in the United States or elsewhere. Courts frequently render opinions in the biotechnology field that may affect the patentability of certain inventions or discoveries, including opinions that may affect the patentability of methods for analyzing or comparing DNA sequences.

In particular, the patent positions of companies engaged in the development and commercialization of genomic and algorithmic diagnostic tests, like our current products and services, and our future products, are particularly uncertain. Various courts, including the U.S. Supreme Court, have rendered decisions that affect the scope of patentability of certain inventions or discoveries relating to certain diagnostic tests and related methods. These decisions state, among other things, that a patent claim that recites an abstract idea, natural phenomenon or law of nature (for example, the relationship between particular genetic variants and cancer) are not themselves patentable. Precisely what constitutes an abstract idea, natural phenomenon or law of nature is uncertain, and it is

possible that certain aspects of genetic or algorithmic diagnostics tests would be found not patentable. Accordingly, the evolving legal and administrative standards around the world, including in the United States may adversely affect our ability to obtain patents and may facilitate third-party challenges to any owned or licensed patents. The laws of some foreign jurisdictions do not protect intellectual property rights to the same extent as the laws of the United States, and we may encounter difficulties in protecting and defending such rights in foreign jurisdictions. The legal systems of many foreign jurisdictions do not favor the enforcement of patent rights and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement of our patent rights and other violations of our intellectual property rights thereunder. Proceedings to enforce our patent rights and other intellectual property protection in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

Changes in patent law in the United States and other jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our Platform and products.

Changes in either the patent laws or in interpretations of patent laws in the United States or other countries or regions may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. We may not develop additional proprietary products, methods and technologies that are patentable.

Assuming that other requirements for patentability are met, prior to March 16, 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. On or after March 16, 2013, under the Leahy-Smith America Invents Act, or the America Invents Act, enacted in September 16, 2011, the United States transitioned to a first inventor to file system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. A third party that files a patent application in the USPTO on or after March 16, 2013, but before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. This will require us to be cognizant of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either (i) file any patent application related to our products or (ii) invent any of the inventions claimed in our or our licensor's patents or patent applications.

The America Invents Act also includes a number of significant changes that affect the way patent applications are prosecuted and also affect patent litigation. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to challenge the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review and derivation proceedings, to attack the validity of a patent. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence might not be sufficient to invalidate the claim if presented in a district court action. Accordingly, third parties have used and may continue to use the USPTO proceedings to invalidate our patent claims that would not have been invalidated if first challenged by the third party in a district court action. Therefore, the America Invents Act and its implementation could increase the uncertainties and costs surrounding our or our licensors' prosecution of patent applications and enforcement or defense of issued patents, all of which could have a material adverse effect on our business, financial condition and results of operations.

The patent positions of companies engaged in the development and commercialization of biotechnology and software are particularly uncertain. Court rulings may narrow the scope of patent protection available in certain circumstances and weaken the rights of patent owners in certain situations. We cannot predict how decisions by the courts, the U.S. Congress or the USPTO may impact the value of our patents. Any similar adverse changes in

the patent laws of other jurisdictions could also have a material adverse effect on our business, financial condition and results of operations. Depending on future actions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could have a material adverse effect on our existing patent portfolio and our ability to protect and enforce our intellectual property in the future. Any of the foregoing could have a material adverse effect on our business, financial condition and results of operations.

Issued patents covering our Platform or products could be found invalid or unenforceable if challenged.

Our owned and licensed patents and patent applications may be subject to priority, validity, inventorship and enforceability disputes. If we or our licensors are unsuccessful in any of these proceedings, such patents and patent applications may be narrowed, invalidated or held unenforceable and we may be required to obtain licenses from third parties, which may not be available on commercially reasonable terms or at all, or we may be required to cease the development, manufacture and commercialization the products we may develop. Any of the foregoing could have a material adverse effect on our business, financial condition and results of operations.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability and our owned and licensed patents may be challenged in courts or patent offices in the United States and abroad. Some of our owned or licensed patent rights may be challenged at a future point in time in opposition, derivation, re-examination, *inter partes* review, post-grant review or interference proceedings and other similar proceedings in foreign jurisdictions. Any successful third-party challenge to our patent rights in this or any other proceeding could result in the narrowing, unenforceability or invalidity, in whole or in part, of such patent rights, which may lead to increased competition to our business, which could harm our business, financial condition and results of operations. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license, develop or commercialize our current or future products.

We may not be aware of all third-party intellectual property rights potentially relating to our Platform and products. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until approximately 18 months after filing or, in some cases, not until such patent applications issue as patents. We might not have been the first to make the inventions covered by each of our pending patent applications and we might not have been the first to file patent applications for these inventions. To determine the priority of these inventions, we may participate in interference proceedings, derivation proceedings or other post-grant proceedings declared by the USPTO that could result in substantial cost to us. The outcome of such proceedings is uncertain. No assurance can be given that other patent applications will not have priority over our patent applications. In addition, changes to the patent laws of the United States allow for various post-grant opposition proceedings that have not been extensively tested, and their outcome is therefore uncertain. Our licensors may also license patent rights to others, and we may not be aware of such licenses before they are granted or such licenses may be subject to disputes or uncertainties that affect patent rights licensed by us or could limit our ability to enforce such patent rights. If third parties bring actions against our owned or licensed patent rights, we could experience significant costs and management distraction.

In patent litigation in the United States or abroad, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, written description, non-enablement or failure to claim patent-eligible subject matter. Grounds for an unenforceability assertion could include an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO or made a misleading statement during prosecution. Similar claims may also be raised before administrative bodies in the United States or abroad, even outside the context of litigation, through mechanisms including re-examination, post-grant review and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in revocation or amendment to our patent rights in such a way that

they no longer cover our Platform and products. The outcome of patent litigation or patent office proceedings following assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and our licensing partners and the patent examiner were unaware during prosecution. If a third party were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our Platform and products. Such a loss of patent protection could have a material adverse impact on our business, financial condition and results of operations.

We and our licensors may initiate or become involved in legal proceedings against a third party to enforce a patent covering our Platform or one of our products. Defendants in such proceedings could counterclaim that the patents covering our Platform or product are invalid or unenforceable and could institute legal proceedings to challenge such patents both in court and before patent offices.

The intellectual property landscape in the next generation sequencing, generative AI, and other fields in which we operate continues to evolve in ways that may impact our business. For example, we are aware of patent litigation involving certain disciplines in which we operate, such as liquid biopsy sequencing methods and minimal residual disease testing methods. While we are not a party to these suits, many of our competitors are or have been, including Guardant Health, Inc., Haystack Oncology, Inc., Invitae Corp., Illumina, Inc., Natera, Inc., NeoGenomics Laboratories, Inc., Personalis, Inc., TwinStrand Biosciences, Inc., and others, and, as a result, we have monitored and continue to monitor their developments and their potential impact on the Company. Given the uncertainty of outcomes of patent litigation disputes, we have not determined whether our products and services could be subject to potential claims of patent infringement based on the patents at issue in these or other cases, whether we may need to modify or change any existing or planned sequencing procedures, or whether any of the patents at issue are valid or enforceable against us. However, it is possible that we will be subject to claims of patent infringement and that we may need to either modify our existing or future sequencing methods or license intellectual property from third parties, both of which could be time consuming and expensive.

Similarly, on September 21, 2023, SEngine Precision Medicine, Inc., or SEngine, a company we acquired on October 3, 2023, received a letter from an attorney representing HUB Organoids IP B.V., or HUB Organoids, which states that SEngine's PARIS® test methodologies "appear to share similarities with methods that the HUB has used in its own organoid work." While the letter received on behalf of HUB Organoids contains no specific allegations that SEngine infringes certain patents controlled by HUB Organoids referenced in the letter, if any claims against us were made by HUB Organoids, including any claim that any portion of the PARIS® test, or any other product, service or test offered by us, infringes any of the referenced patents, we would defend against such claims, however, there can be no assurances that any such defense would be successful. While the use of organoids is not a material aspect of our business at this time, if we are subject to claims of patent infringement, we may need to modify existing methods governing organoid use, or license third party intellectual property, at some point in the future, which may be time consuming and expensive or may not be technically feasible.

We rely on licenses from third parties to provide certain products, and if we lose these licenses or if our rights under these licenses are limited, then our business will be adversely impacted.

We are, and we may acquire companies that are, party to various license agreements that grant us rights to use certain intellectual property, including de-identified patient data, AI software, and certain patents and patent applications, typically in certain specified fields of use. We may need to obtain additional licenses from others to advance our research, development and commercialization activities. Our future licenses may not provide us with exclusive rights to use the licensed intellectual property and technology, or may not provide us with exclusive rights to use such intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our technology in the future. As a result, we may not be able to prevent competitors or other third parties from developing and commercializing competitive products, including in territories covered by our licenses.

If these licenses are terminated, or if the underlying intellectual property rights fail to provide the intended rights and protections, our ability to develop and commercialize products and technology covered by these

license agreements would be limited or lost, and our competitors or other third parties might have the freedom to develop, produce, seek regulatory approval of, or to market, products identical or similar to ours and we may be required to cease our development and commercialization activities. Our actual or potential licensors could also take action with respect to our licensed intellectual property that may decrease the value of such licensed intellectual property. Any of the foregoing could have a material adverse effect on our business, financial condition and results of operations.

Moreover, disputes could arise with respect to any aspect of our license agreements, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- our financial or other obligations under the license agreement;
- the extent to which our Platform, products, and processes infringe, misappropriate, or otherwise violate the intellectual property of the licensor that is not subject to the licensing agreement;
- the licensing of patent and other rights controlled by our licensors or developed under our collaborative development relationships to others;
- the sublicensing of patent and other rights;
- the inventorship and ownership of inventions and know-how licensed to us or resulting from the joint creation or use of intellectual property by our licensors, us and/or our partners; and
- the validity, enforceability or priority of licensed patent rights.

If we do not prevail in such disputes, we may lose any of such license agreements, the license agreements may not be meaningful for our business and operations, and we may be subject to unnecessary or additional payment obligations.

In addition, the agreements under which we currently license intellectual property or technology from third parties are complex, and certain provisions in such agreements could be susceptible to multiple interpretations. The resolution of any such contract interpretation disagreement could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition and results of operations. Moreover, if disputes over licensed intellectual property impair our ability to enforce licensed intellectual property against third parties or use it to defend ourselves in litigation, the value of such licensed intellectual property may be diminished.

Additionally, our licenses may be subject to certain rights of third parties, and, as a result, our current and future licenses may not provide us with exclusive rights to use the licensed intellectual property and technology. Such licenses may be subject to reservations of rights including certain non-commercial rights reserved by universities and certain rights retained by the U.S. government, including march-in rights. Patents licensed to us could be put at risk of being invalidated or interpreted narrowly in litigation filed by or against our licensors or another licensee or in administrative proceedings brought by or against our licensors or another licensee in response to such litigation or for other reasons. As a result, we may not be able to prevent competitors or other third parties from developing and commercializing competitive products, including in territories covered by our licenses.

If we fail to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected product, which could have a material adverse effect on our business, financial condition and results of operations. If any of these license agreements is terminated, if the licensor fails to abide by the terms of the license agreement, if the licensor fails to prevent infringement, misappropriation, or other violations by third parties, or if the licensed patent or other rights are found to be invalid or unenforceable, we may lose our rights to develop and market our technology, may be unable to achieve our business goals and our results of operations and financial condition could be adversely affected. In addition, we may

seek to obtain additional licenses from our licensors and, in connection with obtaining such licenses, we may agree to amend our existing licenses in a manner that may be more favorable to the licensors, including by agreeing to terms that could enable third parties, including our competitors, to receive licenses to a portion of the intellectual property that is subject to our existing licenses and to compete with our products. Absent the license agreements, we could infringe, misappropriate or otherwise violate patents or other intellectual property rights subject to those agreements, and if the license agreements are terminated, we may be subject to litigation by the licensor. Litigation could result in substantial costs and be a distraction to management. If we do not prevail, we may be required to pay damages, including treble damages, attorneys' fees, costs and expenses, royalties or, be enjoined from selling our products and services, including our tests, which could adversely affect our ability to offer products and our business, financial condition and results of operations.

If we cannot license and maintain rights to use third-party intellectual property on reasonable terms, we may not be able to successfully commercialize our products. Our licensed or acquired technology may lose value or utility over time.

From time to time, we may identify third-party intellectual property we may need, including to develop or commercialize new products. We may also need to negotiate licenses before or after introducing a commercial product, and we may not be able to obtain necessary licenses to such intellectual property. The licensing or acquisition of third party intellectual property rights is a competitive area, and several more established companies may pursue strategies to license or acquire third party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. If we are unable to enter into the necessary licenses on acceptable terms or at all, if any necessary licenses are subsequently terminated, if the licensors fail to abide by the terms of the licenses or fail to prevent infringement, misappropriation, or other violations by third parties, or if the licensed patents or other rights are found to be invalid or unenforceable, our business, financial condition and results of operations may suffer. In addition, any technology licensed or acquired by us may lose value or utility, including as a result of a change in the industry, in our business objectives, others' technology, our dispute with the licensor, and other circumstances outside our control. In return for the use of a third party's technology, we may agree to pay the licensor royalties based on sales of our products or services. Royalties are a component of the cost of products and affect the margins on our products. If we are unable to negotiate reasonable royalties or if we have to pay royalties on technology that becomes less useful for us or ceases to provide value to us, our profit margin will be reduced and we may suffer losses.

We may not be able to protect or enforce our intellectual property rights adequately throughout the world.

Filing, prosecuting and defending patents and trademarks on our Platform and products in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some territories outside the United States are less extensive than those in the United States. In some cases, we or our licensors may not be able to obtain patent or trademark protection for certain technology outside of the United States. In addition, the laws of some foreign countries and regions do not protect intellectual property rights to the same extent as the federal and state laws in the United States, and we may encounter difficulties in protecting and defending such rights in foreign jurisdictions where we do pursue patent or trademark protection. Consequently, we may not be able to prevent third parties from practicing our inventions in all jurisdictions, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our inventions in jurisdictions where we have not pursued and obtained patent protection to develop their own products and may also export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products. Our patents or other intellectual property rights existing outside the United States may not be effective or sufficient to prevent them from competing. Similarly, intellectual

property rights may be exhausted in certain situations, and others could import our products sold abroad and compete with us domestically.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries and regions, and particularly developing countries, do not favor the enforcement of patents, trademarks, trade secrets and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement, misappropriation or other violations of our patents, trademarks or other intellectual property, or marketing of competing products in violation of our intellectual property rights generally in such jurisdictions. Proceedings to enforce our patent or other intellectual property rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents or other intellectual property at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded to us, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors is forced to grant a license to third parties with respect to any patents relevant to our business, our business, financial condition and results of operations could be materially and adversely affected.

If we are unable to protect the confidentiality of our trade secrets, the value of our Platform and other technology could be materially adversely affected and our business could be harmed.

In addition to pursuing patents on our Platform and other technology, we take steps to protect our intellectual property and proprietary know-how and technology that is not patentable or that we elect not to patent, including certain of our algorithms and software. We seek to protect our trade secrets and proprietary know-how and technology by entering into agreements, including confidentiality agreements, non-disclosure agreements and intellectual property assignment agreements, with our employees, consultants, academic institutions, corporate partners and, when needed, our advisers. However, we cannot be certain that such agreements have been entered into with all relevant parties, and we cannot be certain that our trade secrets and other proprietary information will not be disclosed or that competitors or other third parties will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. For example, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Such agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements, and we may not be able to prevent such unauthorized use or disclosure. If we are required to assert our rights against such party, it could result in significant cost and distraction.

Monitoring unauthorized use or disclosure is difficult, and we do not know whether the steps we have taken to prevent such use or disclosure are, or will be, adequate. If we were to enforce a claim that a third party had illegally obtained and was using our trade secrets, it would be expensive and time-consuming, and the outcome would be unpredictable. In addition, trade secrets can be difficult to protect and some courts inside and outside the United States are less willing or unwilling to protect trade secrets.

We also seek to preserve the integrity and confidentiality of our proprietary information by maintaining physical security of our premises and physical and electronic security of our information technology systems, but

it is possible that these security measures could be breached and we may not have adequate remedies for any breach. If any of our confidential proprietary information were to be lawfully obtained or independently developed by a competitor, absent patent protection, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties or that our employees have wrongfully used or disclosed trade secrets of their former employers.

We have employed or engaged and expect to employ or engage individuals who were previously employed at or associated with universities or other companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants and independent contractors do not use the proprietary information or know-how of others in their work for us, we have in the past been, and may again in the future be, subject to claims that our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers or other third parties, or to claims that we have improperly used or obtained such trade secrets. Litigation may be necessary to defend against these claims. If we lose, in addition to paying monetary damages, we may be deprived of valuable intellectual property and face increased competition. A loss of key research personnel or work product could hamper or prevent our ability to commercialize potential products, which could harm our business. Even if we are successful in defending against these claims, litigation could result in damage to our reputation and substantial costs and be a distraction to management and affected individuals.

We may not be able to protect and enforce our trademarks and we could infringe or otherwise violate others' trademarks and if our trademarks are not adequately protected, then we may not be able to build name recognition in our markets of interest.

We have not yet registered trademarks in all of our potential markets, although we have registered Tempus and certain diagnostic test names for certain classes of goods and services in the United States. If we apply to register additional trademarks in the United States and other countries, our applications may not be allowed for registration in a timely fashion or at all, and our registered trademarks may not be maintained or enforced and our trademarks may be challenged, infringed, circumvented or declared generic or determined to be infringing on or otherwise violating another mark. For example, opposition or cancellation proceedings may be filed against our trademark applications and registrations, and our trademarks may not survive such proceedings. Such proceedings can be expensive and time-consuming, particularly for a company of our size. If we do not timely register and enforce marks used in connection with our Platform or products, we may encounter difficulty in enforcing them against third parties, and if these marks are registered by others, we could infringe or otherwise violate such trademarks.

We may not be able to protect our rights to these trademarks, which we need to build name recognition among potential partners or customers in our markets of interest. At times, competitors or other third parties may adopt trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trademark infringement or other violation claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks. Over the long term, if we are unable to establish name recognition based on our trademarks, then we may not be able to compete effectively and our business may be adversely affected. Our efforts to enforce or protect our proprietary rights related to trademarks may be ineffective and could result in substantial costs and diversion of resources. Any of the foregoing could have a material adverse effect on our business, financial condition and results of operations.

We may be subject to claims challenging the inventorship or ownership of our owned or licensed intellectual property or claims asserting ownership of what we regard as our own intellectual property.

While it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be

unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. Moreover, even when we obtain agreements assigning intellectual property to us, the assignment of intellectual property rights may not be self-executing or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Furthermore, individuals executing agreements with us may have preexisting or competing obligations to a third party, such as an academic institution, and thus an agreement with us may be ineffective in perfecting ownership of inventions developed by that individual. Disputes about the ownership of intellectual property that we may own may have a material adverse effect on our business, financial condition and results of operations. In addition, former employees may refuse to assign certain intellectual property rights to us, even though we have agreements requiring them to do so. Our ability to enforce our contractual rights may require us to seek legal action, which could be costly and time-intensive.

We or our licensors may be subject to claims that former employees, collaborators or other third parties have an interest in or right to our owned or licensed patents, trade secrets or other intellectual property. For example, we or our licensors may have inventorship disputes arise from conflicting obligations of employees, consultants or others who are involved in developing such intellectual property. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership of our owned or licensed patents, trade secrets or other intellectual property. If we or our licensors fail in defending against any such claims, in addition to paying monetary damages, we may lose exclusive ownership of, or right to use, valuable intellectual property. An inability to incorporate such technologies or features would harm our business and may prevent us from successfully commercializing our products or at all. In addition, we may lose personnel as a result of such claims and any such litigation or the threat thereof may adversely affect our ability to hire employees or contract with independent contractors. A loss of key personnel or their work product could hamper or prevent our ability to commercialize our products. Even if we are successful in defending against such claims, litigation could result in damage to our reputation and substantial costs and be a distraction to management and other employees. Any of the foregoing could have a material adverse effect on our business, financial condition and results of operations.

We may become involved in litigation and other legal proceedings alleging that we are infringing, misappropriating or otherwise violating third-party intellectual property rights, or asserting our intellectual property rights, which could be time-intensive and costly and may adversely affect our business, financial condition and results of operations.

We may become involved with litigation or USPTO actions with various third parties. We expect that the number of such claims may increase as the number of our products grows, and the level of competition in our industry segments increases. Given the vast number of patents in our field of technology, we cannot be certain or guarantee that we do not infringe existing patents or that we will not infringe patents that may be granted in the future. Many companies and institutions have filed, and continue to file, patent applications related to the development and commercialization of genomic and algorithmic diagnostic tests. Some of these patent applications have already been allowed or issued and others may issue in the future. Since this area is competitive and of strong interest to biotechnology companies, there will likely be additional patent applications filed and additional patents granted in the future, as well as additional research and development programs expected in the future. If a patent holder believes the manufacture, use, sale or importation of our products infringe its patent, the patent holder may sue us even if we own or have licensed other patent protection for our technology. The biotechnology industry is characterized by extensive and complex litigation regarding patents and other intellectual property rights. Moreover, we may face patent infringement claims from nonpracticing entities that have no relevant product revenue and against whom our owned or licensed patent portfolio may therefore have no deterrent effect. Any infringement claim, regardless of its validity, could harm our business by, among other things, resulting in time-consuming and costly litigation, diverting management's time and attention from the development of our business, or requiring the payment of monetary damages (including treble damages, attorneys' fees, costs and expenses if we are found to have willfully infringed) and ongoing royalties.

Litigation may be necessary for us to enforce our intellectual property and proprietary rights or to determine the scope, coverage and validity of the intellectual property and proprietary rights of others. The outcome of such lawsuits, as well as any other litigation or proceeding, is inherently uncertain and might not be favorable to us. Further, we could encounter delays in product introductions, or interruptions in the sale of products, as we develop alternative products. In addition, if we resort to legal proceedings to enforce our intellectual property rights or to determine the validity, scope and coverage of the intellectual property or other proprietary rights of others, the proceedings could be burdensome and expensive, even if we were to prevail. If we do not prevail in such legal proceedings, we may be required to pay damages, and we may lose significant intellectual property protection for our products, such that competitors could copy our products. Any litigation that may be necessary in the future could result in substantial costs and diversion of resources and could have a material adverse effect on our business, financial condition and results of operations.

As we move into new markets and applications for our Platform or products, incumbent participants in such markets may assert their patents and other intellectual property or proprietary rights against us as a means of slowing our entry into such markets or as a means to extract substantial license and royalty payments from us. As our business matures and our public profile grows, we may also be subject to an increased number of allegations of patent infringement, whether by our competitors or other patent owners, both in the United States and throughout the world wherever we seek to commercialize our products. Our competitors and others may have significantly larger and more mature patent portfolios than we have. In addition, while we can assert our own patents or other rights during litigation, our own patents may provide little or no deterrence or protection against patent holding companies or other patent owners who have no relevant product or service revenue. Therefore, our commercial success may depend in part on our non-infringement of the patents or other rights of third parties and on our success in defending ourselves in litigation.

However, our research, development and commercialization activities may be subject to claims that we infringe or otherwise violate patents or other intellectual property rights owned or controlled by third parties. There is a substantial amount of litigation and other patent challenges, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology industry, including patent infringement lawsuits, interferences, oppositions and *inter partes* review proceedings before the USPTO, and corresponding proceedings before foreign patent offices. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing products. As the intelligent medicine and healthcare data analytics industries expand and more patents are issued, the risk increases that our Platform or products may be subject to claims of infringement of the patent rights of third parties. Numerous significant intellectual property issues have been litigated, are being litigated and will likely continue to be litigated, between existing and new participants in our existing and targeted markets, and our competitors have asserted and may in the future assert that our Platform or products infringe, misappropriate or otherwise violate their intellectual property rights as part of a business strategy to impede our successful entry into or growth in those markets, and we may enforce our owned or licensed intellectual property rights against our competitors and other parties.

Third parties may assert that we are employing their patents, proprietary technology or trade secrets without authorization. By interacting with us, our licensors may learn more about our business or technology and could assert additional patent rights against us, such as patent rights that are not currently licensed to us or patent rights that may be obtained by any such licensors in the future, which may occur if such patent rights are not available for licensing or if they are not offered on acceptable or commercially reasonable terms. Because patent applications can take many years to issue and are not publicly available until a certain period of time passes from filing, there may be currently pending patent applications which may later result in issued patents that our current or future products and services may infringe. In addition, similar to what other companies in our industry have experienced, we expect our competitors and others may develop or obtain patents with our Platform or products in mind and claim that making, having made, using, selling, offering to sell or importing our products infringes these patents.

Patent and other types of intellectual property litigation can involve complex factual and legal questions, and their outcome is uncertain. Even if we believe such claims are without merit, a court of competent

jurisdiction could hold that these third-party patents are valid, enforceable and infringed, which could adversely affect our ability to commercialize our technology. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity. As this burden is a high one requiring us to present clear and convincing evidence as to the invalidity of any such U.S. patent claim, there can be no assurance that a court of competent jurisdiction would invalidate the claims of any such U.S. patent or find that our technology did not infringe any such claims. Further, even if we were successful in defending against any such claims, such claims could require us to incur substantial costs and divert financial resources and the attention of our management and technical personnel in defending against any of these claims. Parties making claims against us may be able to sustain the costs of complex patent litigation more effectively than we can, for example, because they have substantially greater resources.

If any third-party patent were to be asserted against us, there can be no assurance that any defenses will be successful. If our defenses to such assertion were unsuccessful, the third-party making claims against us may be able to obtain injunctive or other relief, including by court order, which could block our ability to develop, commercialize and sell certain products, and could result in the award of substantial damages against us, including treble damages, attorney's fees, costs and expenses if we are found to have willfully infringed. In the event of a successful claim of infringement against us, we may be required to pay damages and ongoing royalties, and obtain one or more licenses from third parties, or be prohibited from selling certain products. Further, we may be required to redesign our technology in a non-infringing manner which may not be commercially feasible. We could also be required or may choose to obtain a license from such third party to continue developing, manufacturing and marketing our technology. However, we may not be able to obtain these licenses on acceptable or commercially reasonable terms, if at all, or these licenses may be non-exclusive, which could result in our competitors gaining access to the same intellectual property. In addition, we could encounter delays in product introductions while we attempt to develop alternative products to avoid infringing third-party patents or otherwise violating proprietary rights. Defense of any lawsuit or failure to obtain any of these licenses could prevent us from commercializing products, and the prohibition of sale of any of our products could materially affect our business and our ability to gain market acceptance for our products. Any of the foregoing could have a material adverse effect on our business, financial condition and results of operations.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses and could distract our scientific and management personnel from their normal responsibilities. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities.

In addition, our agreements with some of our customers, suppliers or other entities with whom we do business require us to defend or indemnify these parties to the extent they become involved in infringement claims, including the types of claims described above. We could also voluntarily agree to defend or indemnify third parties in instances where we are not obligated to do so if we determine it would be important to our business relationships. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, financial condition and results of operations.

Obtaining and maintaining our patent and trademark protection depends on compliance with various required procedures, document submissions, fee payments and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications and trademarks and trademark applications will be due to be paid to the USPTO and various governmental patent agencies outside of the United States at several stages over the lifetime of the patents and/or applications and trademarks and trademark applications. We have systems in place to remind us to pay these fees, and we rely on our outside counsel to pay these fees due to U.S. and non-U.S. patent and trademark agencies. The USPTO and various foreign governmental patent and trademark agencies require compliance with a number of procedural, documentary, fee payment and other similar requirements during the patent and trademark application processes. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which non-compliance can result in abandonment or forfeiture of the patent or patent application or trademark or trademark application and thus the partial or complete loss of patent or trademark rights in the relevant jurisdiction. Such an event would allow our competitors to enter the unprotected market and have a material adverse effect on our business, financial condition and results of operations.

Patent terms may be inadequate to protect our competitive position for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our Platform or products are obtained, once the patent life has expired, we may be open to competition. Given the amount of time required for the development, testing and regulatory review of our new products, patents protecting them might expire before or shortly after they are commercialized. As a result, our owned and licensed patent portfolio may not provide us with a sufficient exclusivity period to exclude others from commercializing products similar or identical to ours.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make products that are similar to ours, but that are not covered by the claims of the patents that we license or may own in the future;
- we, or our license partners or future collaborators, might not have been the first to make the inventions covered by the issued patent or pending patent applications that we license or may own in the future;
- we, or our license partners or future collaborators, might not have been the first to file patent applications covering certain of our or their inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our owned or licensed intellectual property rights;
- it is possible that our pending licensed patent applications or those that we may own in the future will not lead to issued patents;
- issued patents that we hold rights to now or in the future may be held invalid or unenforceable, including as a result of legal challenges by our competitors;
- others may have access to the same intellectual property rights licensed to us in the future on a nonexclusive basis;

- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;
- the patents or other intellectual property rights of others may have an adverse effect on our business; or
- we may choose not to file a patent for certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property.

Any of the foregoing could have a material adverse effect on our business, financial condition and results of operations.

Our products contain third-party open source software components and failure to comply with the terms of the underlying open source software licenses could restrict our ability to sell our products or may require us to publicly disclose our proprietary software.

Our products contain software tools licensed by third parties under open source software licenses. Use and distribution of open source software may entail greater risks than use of third-party commercial software, as open source software licensors generally do not provide warranties or other contractual protections regarding infringement or other violation claims or the quality of the code. Some open source software licenses contain requirements that the licensee make its source code publicly available if the licensee creates modifications or derivative works using the open source software or provide software services at no cost to the user, depending on the type of open source software the licensee uses and how the licensee uses it. If we combine our proprietary software with open source software in a certain manner, we could, under certain open source software licenses, be required to release the source code of our proprietary software to the public for free. This would allow our competitors to create similar products with less development effort and time and ultimately could result in a loss of product sales and revenue. In addition, some companies that use third-party open source software have faced claims challenging their use of such open source software, seeking enforcement of open source license provisions, asserting ownership of open source software incorporated in products and demanding compliance with the terms of the applicable open source license. We may be subject to suits by third parties claiming ownership of what we believe to be open source software, or claiming non-compliance with the applicable open source licensing terms. Use of open source software may also present additional security risks because the public availability of such software may make it easier for hackers and other third parties to compromise or attempt to compromise our Platform and systems. If an author or other third party that distributes such open source software were to allege that we had not complied with the conditions of an open source license, we could incur significant legal costs defending ourselves against such allegations. In the event such claims were successful, we could be subject to significant damages or be enjoined from the distribution of our products.

There is little legal precedent and the terms of many open source software licenses have not been interpreted by United States courts, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our products. Moreover, we cannot assure investors that our processes for monitoring and controlling our use of open source software in our products will be effective. If we are held to have breached the terms of an open source software license, we could be required to seek licenses from third parties to continue offering our products on terms that are not economically feasible, to re-engineer our product, to discontinue the sale of our products if re-engineering could not be accomplished on a timely basis, or to make generally available, in source code form, our proprietary code, any of which could adversely affect our business, financial condition and results of operations.

General Risk Factors

Our business could be adversely affected by the effects of health pandemics or epidemics, including the COVID-19 global pandemic.

Our business could be adversely affected by the effects of health pandemics or epidemics, including the COVID-19 global pandemic. For example, the COVID-19 global pandemic and the various attempts throughout the world to contain it created significant volatility, uncertainty and disruption.

We experienced significant reduction in access to our customers, including restrictions on our ability to market and distribute our tests and to collect samples. Our partners, vendors and customers similarly had their operations altered or temporarily suspended. Due to impacts and measures resulting from the COVID-19 pandemic, we experienced and could again experience unpredictable reductions in the demand for our tests as healthcare customers divert medical resources and priorities toward the treatment of the virus. To the extent the COVID-19 pandemic causes severe disruption again in the future, vendors of equipment and reagents for our operations could also reduce production or even go out of business, resulting in supply constraints for us. The COVID-19 pandemic resulted in, and could continue to cause, increased costs or delays to production and development of our products.

The COVID-19 pandemic has also led to uncertainties related to our growth, forecast and trends. Our historic results such as revenues, operating margins, cash flows, tests performed, and other financial and operating metrics, may not be indicative of our results for future periods. For example, following a reduced demand for COVID-19 testing, we stopped offering COVID-19 PCR diagnostic tests in the first quarter of 2023. Increases in the number of diagnostic tests performed by us prior to the COVID-19 pandemic may reflect an acceleration of growth that we may not see during or after the COVID-19 pandemic. The COVID-19 pandemic and its future developments present uncertainties with respect to our performance, financial condition, volume of business, results of operations, and cash flows. Due to the uncertain scope and duration of the COVID-19 pandemic and uncertain timing of any recovery or normalization, we are currently unable to estimate the resulting impacts on our operations and financial results.

We may acquire businesses, form joint ventures or make investments in companies or technologies that could negatively affect our operating results, distract management's attention from other business concerns, dilute our stockholders' ownership, and significantly increase our debt, costs, expenses, liabilities and risks.

We have made acquisitions of businesses, technologies and assets and may pursue additional acquisitions in the future. We also may pursue strategic alliances and additional joint ventures that leverage our Platform and industry experience to expand our product offerings or distribution. We have limited experience with acquisitions and forming strategic partnerships. We compete for those opportunities with others including our competitors, some of which have greater financial or operational resources than we do. We may not be able to identify suitable acquisition candidates or strategic partners, we may have inadequate access to information or insufficient time to complete due diligence, and we may not be able to complete such transactions on favorable terms, if at all. If we make any acquisitions, we may not be able to integrate these acquisitions successfully into our existing business, and we could assume unknown or contingent liabilities. Difficulties in assimilating acquired businesses include redeployment or loss of key employees and their severance, combination of teams and processes in various functional areas, reorganization or closures of facilities, relocation or disposition of excess equipment, and increased litigation, regulatory and compliance risks, any of which could be expensive and time consuming and adversely affect us. Integration of an acquired business also may disrupt our ongoing operations and require management resources that we would otherwise focus on developing our existing business. In addition, any acquisition could result in the incurrence of debt, contingent liabilities or future write-offs of intangible assets or goodwill, any of which could have a material adverse effect on our financial condition, results of operations and cash flows. We may also experience losses related to investments in other companies, which could have a material negative effect on our business, financial condition and results of operations. We may not realize the anticipated benefits of any acquisition, technology license, strategic alliance or joint venture.

To finance any acquisitions, joint ventures or investments, we may choose to issue shares of our common stock as consideration, which would dilute the ownership of our stockholders. Additional funds may not be available on terms that are favorable to us, or at all. If the price of our common stock is low or volatile, we may not be able to acquire other companies or fund a joint venture project using our stock as consideration.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

We have incurred net losses since our inception and we may never achieve or sustain profitability. Generally, losses incurred will carry forward until such losses expire (for losses generated prior to January 1, 2018) or are used to offset future taxable income, if any. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the IRC, if a corporation undergoes an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation's ability to use its pre-change net operating loss, or NOL, carryforwards and other pre-change tax attributes (such as research tax credits) to offset its post-change income or taxes may be limited. We have not completed a study to assess whether one or more ownership change for purposes of Section 382 or 383 have occurred since our inception. For purposes of Section 382 or 383, we may have experienced ownership changes in the past and may experience ownership changes in the future as a result of shifts in our stock ownership (some of which shifts are outside our control). As a result, if we earn net taxable income, our ability to use our pre-change NOL carryforwards to offset such taxable income will be subject to limitations. Similar provisions of state tax law may also apply to limit our use of accumulated state tax attributes. Therefore, if we attain profitability, we may be unable to use a material portion of our NOL carryforwards and other tax attributes, which could adversely affect our future cash flows. In addition, the Tax Cuts and Jobs Act of 2017 imposes a reduction to the maximum deduction allowed for NOLs generated in tax years beginning after December 31, 2017. These changes may adversely affect our future cash flow.

Taxing authorities may successfully assert that we should have collected or in the future should collect sales and use, value added, or similar taxes, and we could be subject to tax liabilities with respect to past or future sales, which could adversely affect our results of operations.

We do not collect sales and use, value added, and similar taxes in all jurisdictions in which we have sales, based on our belief that such taxes are not applicable or that we are not required to collect such taxes with respect to the jurisdiction. Sales and use, value added, and similar tax laws and rates vary greatly by jurisdiction. Certain jurisdictions in which we do not collect such taxes may assert that such taxes are applicable, which could result in tax assessments, penalties, and interest, and we may be required to collect such taxes in the future. Such tax assessments, penalties, and interest or future requirements may adversely affect our results of operations.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our operating results could fall below our publicly announced guidance or the expectations of securities analysts and investors, resulting in a decline in the market price of our common stock.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America, or GAAP, requires management to make estimates and assumptions that affect the amounts reported in our financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. Actual results could therefore differ materially from these estimates under different assumptions or conditions. It is possible that interpretation, industry practice and guidance may evolve as we work toward implementing these new accounting standards. If our assumptions change or if actual circumstances differ from our assumptions, our operating results may be adversely affected and could fall below our publicly announced guidance or the expectations of analysts and investors, resulting in a decline in the market price of our common stock.

We are highly dependent on the services of Eric Lefkofksy and other members of our senior management team and the loss of any member of our senior management team or our inability to attract and retain highly skilled scientists, clinicians, sales representatives and business development managers could adversely affect our business, financial condition and results of operations.

Our success depends on the skills, experience and performance of key members of our senior management team. In particular, we are highly dependent on the services of Eric Lefkofsky, our Founder, Chief Executive Officer, and Chairman of our board of directors. Mr. Lefkofsky spends substantially all of his professional time with us, and he is highly active in our management; however, he does devote some of his time and attention to other endeavors. Mr. Lefkofsky is also a co-founder and serves as Executive Chairman of the board of Pathos AI, Inc., an AI-enabled drug development company that has entered into an agreement with us, is the managing partner and co-founder of Lightbank LLC, a private venture capital firm specializing in investments in technology companies that has invested in us, and is a trustee of the Lefkofsky Family Foundation. Mr. Lefkofsky's participation in and attention to these other endeavors may impact our business. In October 2022, for example, Lightbank and the Lefkofsky Family Foundation experienced a cybersecurity incident in which third party hackers gained access to Lightbank's internal computer services and were able to exfiltrate data regarding Lightbank's historical business practices and Mr. Lefkofsky's personal financial information. While the incident did not involve or impact Tempus' systems, this security breach or others like it could indirectly impact Tempus.

In addition, we depend on the services of our Chief Operating Officer, Ryan Fukushima. Mr. Fukushima is a co-Founder of Pathos AI, Inc. and currently serves as its interim Chief Executive Officer. Under the terms of his employment agreement with Tempus, Mr. Fukushima devotes no less than 50% of his professional activities to Tempus.

The individual and collective efforts of Mr. Lefkofsky, Mr. Fukushima and our other employees will be important as we continue to develop our Platform and additional products, and as we expand our commercial activities. The loss or incapacity of existing members of our executive management team, or the inability of such individuals to devote sufficient time to our endeavors, could adversely affect our operations if we experience difficulties in hiring qualified successors. Our executive officers signed offer letters when first joining our company, and have entered into subsequent employment agreements, and we cannot guarantee their retention for any period of time. We do not maintain "key person" insurance on any of our employees, including Mr. Lefkofsky. Additionally, we have a number of key employees whose equity ownership in our company gives them a substantial amount of personal wealth. As a result, it may be difficult for us to continue to retain and motivate these employees, and this wealth could affect their decisions about whether or not they continue to work for us or at all.

Our research and development programs and laboratory operations depend on our ability to attract and retain highly skilled scientists and technicians. We may not be able to attract or retain qualified scientists and technicians in the future due to the competition for qualified personnel among life science businesses, particularly near our laboratories in Chicago, Atlanta and Raleigh. We also face competition from universities and public and private research institutions in recruiting and retaining highly qualified scientific personnel. In addition, we may have difficulties locating, recruiting or retaining qualified sales representatives and business development managers, as well as software engineers. Recruiting and retention difficulties can limit our ability to support our research and development and sales programs. All of our employees are at-will, which means that either we or the employee may terminate their employment at any time.

Further, certain macroeconomic conditions, which have been referred to as the Great Resignation, may result in higher than normal attrition in the sectors in which we operate, and in our business in particular. Our ability to manage human capital, and attract and retain the resources necessary to operate our business successfully, may suffer as a result.

We previously identified a material weakness in our internal control over financial reporting. If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud.

Upon completion of this offering, we will be required to document and test our internal controls over financial reporting pursuant to Section 404 of Sarbanes-Oxley Act of 2002, or Section 404, so that our management can certify as to the effectiveness of our internal controls over financial reporting. Likewise, our independent registered public accounting firm will be required to provide an attestation report on the effectiveness of our internal control over financial reporting at such time as we cease to be an "emerging growth company," as defined in the Jumpstart our Business Startups Act of 2012, or the JOBS Act. At such time, our independent registered public accounting firm may issue a report that is adverse if a material weakness is identified.

In connection with the preparation of our consolidated financial statements, we identified a material weakness in our internal control over financial reporting as of December 31, 2021, as described below. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our consolidated financial statements will not be prevented or detected on a timely basis.

We did not design or maintain an effective control environment due to an insufficient complement of personnel with the appropriate level of technical accounting and financial reporting knowledge and experience commensurate with our financial reporting requirements.

We determined the material weakness described above has been remediated as of December 31, 2022 as management has completed the design and implementation of controls over technical accounting and financial reporting, including the hiring of a Chief Accounting Officer and other key technical accounting and financial reporting roles to further develop and document our accounting policies and financial reporting procedures, including ongoing senior management review.

Despite remediating the material weakness described above, we can give no assurance that any additional material weaknesses or restatements of financial results will not arise in the future due to a failure to implement and maintain adequate internal control over financial reporting or circumvention of these controls. If our management is unable to conclude that we have effective internal controls over financial reporting, or to certify the effectiveness of such controls, or if our independent registered public accounting firm cannot render an unqualified opinion on management's assessment and the effectiveness of our internal control over financial reporting, or if material weaknesses in our internal controls are identified in the future, we could be subject to regulatory scrutiny and a loss of public confidence, which could have a material adverse effect on our business and our stock price.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

We are subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to provide reasonable assurance that information we must disclose in reports we file or submit under the Exchange Act is accumulated, communicated to management, recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

Our employees, principal investigators, consultants and commercial partners may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, principal investigators, consultants and commercial partners. Misconduct by these parties could include intentional failures to comply with the regulations of the FDA, CMS and non-U.S. regulators, comply with healthcare fraud and abuse laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing, and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Such misconduct could also involve the improper use of information obtained in the course of clinical studies, which could result in regulatory sanctions and cause serious harm to our reputation. We currently have a code of conduct applicable to all of our employees, but it is not always possible to identify and deter employee misconduct, and our code of conduct and the other precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses, or in protecting us from governmental investigations, lawsuits or other actions stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could result in the imposition of significant civil, criminal and administrative penalties, including, without limitation, damages, monetary fines, individual imprisonment, disgorgement of profits, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs or from coverage of commercial payers, contractual damages, reputational harm, diminished profits and future earnings, additional reporting or oversight obligations if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with the law and curtailment or restructuring of our operations, which could have a significantly adverse impact on our business, financial condition and results of operations. Whether or not we are successful in defending against such actions, we could incur substantial costs and expenses, including legal fees, and divert the attention of management from the operation of our business.

Legal claims and proceedings could adversely impact our business.

We have been and may in the future be subject to threatened or actual legal claims and regulatory proceedings. We consider our historical experiences with such claims and proceedings to be in the normal course of our business or typical for our industry; however, it is difficult to assess the outcome of these matters, and we may not prevail in any current or future proceedings or litigation. For example, we have received a demand from a significant stockholder to provide certain of our books and records pursuant to Section 220 of the Delaware Corporation Law, and any future litigation related to this request could materially adversely affect us. Regardless of their merit, any threatened or actual claims or proceedings can require significant time and expense to investigate and defend. Since litigation is inherently uncertain, there is no guarantee that we will be successful in defending ourselves against such claims or proceedings, or that our assessment of the materiality of these matters, including any reserves taken in connection therewith, will be consistent with the ultimate outcome of such matters.

Certain of our officers, directors and principal stockholders may pursue corporate opportunities independent of us that could present conflicts with our and our stockholders' interests.

Certain of our officers, directors and principal stockholders are in the business of making or advising on investments in companies and hold (and may from time to time in the future acquire) interests in or provide advice or services to businesses that may directly or indirectly compete with our business or be suppliers or customers of ours. These persons may also pursue acquisitions that may be complementary to our business or enter into lines that we may otherwise be well positioned to enter, and, as a result, those acquisition opportunities may not be available to us. For example our Chief Executive Officer, Founder, and Chairman, Eric Lefkofsky, is a co-founder and serves as Executive Chairman of the board of Pathos AI, Inc., a company engaged in the discovery and development of

therapeutics and with whom we have a commercial relationship, as well as Lightbank LLC, a private venture capital firm specializing in investments in technology companies. Our charter provides that none of our officers or directors who are also an officer, director, employee, partner, managing director, principal, independent contractor or other affiliate of our principal stockholders will be liable to us or our stockholders for breach of any fiduciary duty by reason of the fact that any such individual pursues or acquires a corporate opportunity for its own account or the account of an affiliate, as applicable, instead of us, directs a corporate opportunity to any other person, instead of us or does not communicate information regarding a corporate opportunity to us.

If we were to be sued for product liability or professional liability, we could face substantial liabilities that exceed our resources.

The marketing, sale and use of our products could lead to the filing of product liability claims were someone to allege that our products identified inaccurate or incomplete information regarding the sample or information analyzed, reported inaccurate or incomplete information concerning the available therapies for a disease, or otherwise failed to perform as designed. We may also be subject to professional liability for errors in, a misunderstanding of, or inappropriate reliance upon, the information we provide in the ordinary course of our business activities. A product liability or professional liability claim could result in substantial damages and be costly and time-consuming for us to defend.

We maintain product and professional liability insurance, but this insurance may not fully protect us from the financial impact of defending against product liability or professional liability claims. Any product liability or professional liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing insurance coverage in the future. Additionally, any product liability or professional liability lawsuit could damage our reputation or cause current clinical customers to terminate existing agreements with us and potential clinical customers to seek other partners, any of which could adversely impact our results of operations.

We depend on information technology systems, including on-premises, co-located and third-party data centers and platforms, and any interruptions of service or failures may impair and harm our business, financial condition and results of operations.

We depend on information technology and telecommunications systems for significant elements of our operations, including our laboratory information management system, our computational biology system, our AI algorithms, our knowledge management system, and our customer reporting. We have installed, and expect to expand, a number of enterprise software systems that affect a broad range of business processes and functional areas, including for example, systems handling human resources, financial controls and reporting, contract management, regulatory compliance and other infrastructure operations. In addition to the aforementioned business systems, we intend to extend the capabilities of both our preventative and detective security controls by augmenting the monitoring and alerting functions, the network design and the automatic countermeasure operations of our technical systems. These information technology and telecommunications systems support a variety of functions, including laboratory operations, test validation, sample tracking, quality control, customer service support, billing and reimbursement, research and development activities, scientific and medical curation and general administrative activities. In addition, our third-party provider of billing and collections services for late-stage clinical testing in the United States depends upon technology and telecommunications systems provided by its outside vendors.

We also rely on on-premises, co-located and third-party infrastructure throughout the United States to perform computationally demanding analysis tasks for our algorithmic diagnostic products and our data business, as well as for our research and development program and for other business purposes. Information technology and telecommunications systems are vulnerable to damage from a variety of sources, including telecommunications or network failures, malicious human acts and natural disasters. Moreover, despite network security and back-up measures, some of the servers upon which we rely are potentially vulnerable to physical or electronic break-ins, computer viruses and similar disruptive problems. Despite the precautionary measures we

have taken to prevent problems that could affect our information technology and telecommunications systems, failures or significant downtime of our information technology or telecommunications systems or those used by our third-party service providers could prevent us from preparing and providing reports to physicians, billing payers, processing reimbursement appeals, handling patient or physician inquiries, conducting research and development activities and managing the administrative aspects of our business.

In the event of any technical problems that may arise in connection with our on-premises, co-located or third-party data centers, we could experience interruptions in our ability to provide AI-enabled products to our customers or in our internal functions, including research and development, which rely on such services, or to operate the other administrative aspects of our business. Interruptions or failures may be caused by a variety of factors, including infrastructure changes, human or software errors, viruses, worms, ransomware, security attacks, fraud, spikes in customer usage and denial of service issues. Interruptions or failures in our data analytics operations may reduce our revenue, result in the loss of customers, adversely affect our ability to attract new customers or harm our reputation. Significant interruptions to our research and development programs could cause us to delay the introduction of new products or improvements to existing products, which could adversely impact our business, financial condition, results of operations and the competitiveness of our products. In such events, our insurance policies may not adequately compensate us for losses that we may incur but such events could subject us to liability and cause us to issue credits or cause customers to abandon our products.

In addition, we currently use the Google Cloud Platform, or Google Cloud, for a substantial portion of our computing, storage, data processing, networking and other services. Any significant disruption of, or interference with, our use of Google Cloud could adversely affect our business, financial condition and results of operations. Google has broad discretion to change and interpret the terms of service and other policies with respect to us, and those actions may be unfavorable to our business operations. Google may also take actions beyond our control that could seriously harm our business, including discontinuing or limiting our access to one or more services, increasing pricing terms, terminating or seeking to terminate our contractual relationship altogether or altering how we are able to process data in a way that is unfavorable or costly to us. If our arrangements with Google Cloud were terminated, or we are forced to transition to a new cloud provider, we could experience interruptions in our ability to conduct our diagnostic tests or to make our data product available to customers, as well as delays and additional expenses in arranging for alternative cloud infrastructure services. Any transition to new cloud providers would be difficult to implement and would cause us to incur significant delays and expense.

Additionally, we are vulnerable to service interruptions experienced by Google Cloud and other providers, and we expect to experience interruptions, delays or outages in service availability in the future due to a variety of factors, including infrastructure changes, human, hardware or software errors, hosting disruptions and capacity constraints. The level of service provided by these providers, or regular or prolonged interruptions in that service, could also affect the use of, and our customers' satisfaction with, our products and could harm our business and reputation. In addition, hosting costs will increase as our customer base grows, which could harm our business if we are unable to grow our revenue faster than the cost of using these services or the services of other providers. Any of these factors could further reduce our revenue or subject us to liability, any of which could adversely affect our business, financial condition and results of operations.

Cyber-based attacks, security breaches, loss of data and other disruptions in relation to our information systems and computer networks could compromise sensitive information related to our business, prevent us from accessing it and expose us to substantial liability, which could adversely affect our business and reputation.

Cyber-attacks, security breaches, computer virus infections, malware execution, and other incidents could cause misappropriation, exposure, loss or other unauthorized disclosure of confidential data, personal information, materials or information, including those concerning our customers and employees. Increasingly complex methods have been used in cyber-attacks, including ransomware, phishing, supply chain attacks, structured query language injections and distributed denial-of-service attacks. A cyber-attack can also be in the form of unauthorized access to

our network resources (or a blocking of authorized access). Ransomware attacks are becoming increasingly prevalent and severe and can lead to significant interruptions, delays, or outages in our operations, disruption of clinical trials, loss of data (including data related to clinical trials), loss of income, significant extra expenses to restore data or systems, reputational loss and the diversion of funds. To alleviate the financial, operational and reputational impact of a ransomware attack, ransomware attack victims may prefer to make payment demands, but if we were to be a victim of such an attack, we may be unwilling or unable to do so (including, for example, if applicable laws or regulations prohibit such payments). Similarly, supply chain attacks have increased in frequency and severity, and we cannot guarantee that third parties and infrastructure in our supply chain have not been compromised or that they do not contain exploitable defects or bugs that could result in a breach or disruption of our systems and networks or the systems or networks of third parties that support us. Despite the security controls we have in place, such attacks are difficult to avoid. Although we are not aware of any such breaches or incidents of our or our third-party vendors' systems or information, we can provide no assurance that we or our vendors will be able to detect, prevent or contain the effects of such attacks or other information security risks, vulnerabilities or threats in the future. The costs of attempting to protect against the foregoing risks and the costs of responding to and remediating systems from a cyber-attack are significant. Large scale data breaches at other entities increase the challenge we and our vendors face in maintaining the security of our information technology systems and of our customers' sensitive information. Following a cyber-attack, our and/or our vendors' remediation efforts may not be successful, and a cyber-attack could result in interruptions, delays or cessation of service, and loss of existing or potential customers. In addition, breaches of our and/or our vendors' security measures and the unauthorized dissemination or availability of sensitive personal information or proprietary information or confidential information about us, our customers or other third parties, could expose our customers' private information and our customers to the risk of financial or medical identity theft, or expose us or other third parties to a risk of loss or misuse of this information, and result in investigations, regulatory enforcement actions, material fines and penalties, loss of customers, litigation or other actions which could have a material adverse effect on our business, financial condition and results of operations. In addition, if we fail to adhere to our privacy policy and other published statements about our privacy or cybersecurity practices, or applicable laws concerning our processing, use, transmission and disclosure of protected information, or if our statements or practices are found to be deceptive or misrepresentative, we could face regulatory actions, fines and other liability. See "Risk Factors—Risks Related to Our Highly Regulated Industry." Our collection, processing, use and disclosure of personally identifiable information, including patient and employee information, is subject to privacy and security regulations, and our failure to comply with those regulations or to adequately secure the information in our possession could result in significant liability or reputational harm."

In the ordinary course of our business, we collect and store sensitive data, including PHI, personally identifiable information, credit card and other financial information, intellectual property and proprietary business information owned or controlled by us or other parties such as customers and payers. We manage and maintain our applications and data utilizing a combination of on-site systems and cloud-based data centers. We utilize external security and infrastructure vendors to manage parts of our data centers. We also communicate sensitive data, including patient data, through phone, Internet, facsimile, multiple third-party vendors and their subcontractors or integrations with third-party electronic medical records. These applications and data encompass a wide variety of information critical to our business, including research and development information, patient data, commercial information and business and financial information. We face a number of risks related to protecting this critical information, including loss of access, intentional or accidental inappropriate use or disclosure, unauthorized access, inappropriate modification and the risk of our being unable to adequately monitor, audit or modify our controls over such critical information. This risk extends to the third-party vendors and subcontractors we use to manage this sensitive data or otherwise process it on our behalf.

The secure processing, storage, maintenance and transmission of this critical information are vital to our operations and business strategy, and we devote significant resources to a variety of mechanisms, including administrative, physical and technical measures, intended to protect such information. Although we take measures designed to protect sensitive data from unauthorized access, use, modification or disclosure, no security measures can be perfect or protect against all threats or vulnerabilities and our information technology

infrastructure could be vulnerable to hackers, phishing scams, malware, viruses, security flaws, errors by employees or others who have authorized access to our network, and other malfeasance or inadvertent disruptions. Any breach or interruption of our security measures or information technology infrastructure could compromise our networks, and the information stored there could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such access, breach, or other loss of information could result in legal claims or proceedings, and liability under federal, state or foreign laws that protect the privacy of personal information, such as HIPAA or HITECH, and regulatory penalties.

Notice of HIPAA breaches must be made to affected individuals, the Secretary of the Department of Health and Human Services or other state, federal or foreign regulators, including State Attorneys General, and for extensive breaches, notice may need to be made to the media. Such a notice could harm our reputation and our ability to compete. Although we have implemented security measures and an enterprise security program to prevent unauthorized access to patient data, such data is currently accessible through multiple channels, and there is no guarantee we can protect all data from breach or exposure. Unauthorized access, loss or dissemination could disrupt our operations (including our ability to perform our analysis, provide test results, bill payers or patients, process claims and appeals, provide customer assistance, conduct research and development, develop intellectual property, collect, process and prepare financial information, provide information about our tests and continue other patient and physician education and outreach efforts, and manage our business) and damage our reputation, any of which could adversely affect our business, financial condition and results of operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in or cancellation of our regulatory approval efforts and significantly increase our costs to recover or reproduce the lost data. We may also rely on third parties for their products or services on which we depend, and similar events relating to their computer systems could also have a material adverse effect on our business, financial condition and results of operations. To the extent that any disruption or security incident were to result in any loss, destruction, or alteration of, or damage or unauthorized access to, our data or other information that is processed or maintained on our behalf, or inappropriate disclosure of or dissemination of any such information, the further development and commercialization of our product candidates could be delayed. We continue to prioritize security and the development of practices and controls to protect our systems. As cyber threats evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities, and these efforts may not be successful.

We have contingency plans and insurance coverage for certain potential claims, liabilities, and costs relating to security incidents that may arise from our business or operations; however, the coverage may not be sufficient to cover all claims, liabilities, and costs arising from the incidents, including fines and penalties. In addition, we cannot be certain that insurance for cybersecurity incidents will continue to be available to us on economically reasonable terms, or at all, or that any insurer will not deny coverage as to any future claim. It could be difficult to predict the ultimate resolution of any such incidents or to estimate the amounts or ranges of potential loss, if any, that could result therefrom. If we cannot successfully resolve a security incident or contain any potential loss, it could materially impact our business, financial condition and results of operations.

International expansion of our business exposes us to business, regulatory, political, operational, financial, and economic risks associated with doing business outside of the United States.

We currently have limited international operations, but our business strategy incorporates potentially significant international expansion. We plan to conduct physician and patient association outreach activities, to extend laboratory capabilities, to expand payer relationships and to market our Data business to pharmaceutical and biotechnology customers outside of the United States. Doing business internationally involves a number of risks, including:

- multiple, conflicting and changing laws and regulations such as privacy regulations, including regulations that limit our ability to collect and distribute de-identified patient data, tax laws, export and import restrictions, economic sanctions and embargoes, employment laws, healthcare regulatory requirements, including those governing diagnostic testing and reimbursement, and other governmental approvals, permits and licenses;

- failure by us, our distributors, our local partners to obtain regulatory approvals for the use of our products in various countries;
- additional potentially blocking or relevant third-party patent or other intellectual property rights;
- complexities and difficulties in obtaining intellectual property protection and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payer reimbursement regimes, government payers, or patient self-pay systems;
- logistics and regulations associated with shipping blood samples, including infrastructure conditions and transportation delays;
- patient populations that are underrepresented in our databases;
- limits in our ability to penetrate international markets if we are not able to perform our tests locally;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our products and exposure to foreign currency exchange rate fluctuations, currency controls and cash repatriation restrictions;
- natural disasters, political and economic instability, including wars (such as the armed conflicts between Russia and Ukraine and Israel and Hamas), terrorism, and political unrest, boycotts, curtailment of trade and other business restrictions;
- public health or similar issues, such as epidemics or pandemics, including the current outbreak of COVID-19, that could cause business disruption; and
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and distributors' activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act, or FCPA, its books and records provisions, or its anti-bribery provisions.

In late February 2022, Russian military forces launched a significant military action against Ukraine. In October 2023, following a series of coordinated attacks in Israel conducted by the Palestinian Islamist militant group Hamas, Israel began air strikes and a subsequent ground war against Hamas. The Israel/Hamas conflict is threatening to spread, and may in the future spread, into other Middle Eastern countries. While our business and operations are currently not impacted, including in Israel where we sell certain molecular tests through a third party and perform certain testing services, it is not possible to predict consequences of these crises, or any other conflicts that may arise, which could include further sanctions, embargoes, regional instability, geopolitical shifts and adverse effects on macroeconomic conditions, security conditions, currency exchange rates and financial markets, any of which could have a material adverse impact on our future operations and results.

Any of these factors could significantly harm our future international expansion and operations and, consequently, our revenue and results of operations.

Our existing and any future debt may affect our flexibility in operating and developing our business and our ability to satisfy our obligations.

As of September 30, 2023, we had indebtedness of $426.0 million, comprised of $198.9 million under the convertible promissory note, as amended, or the Amended Note, that we issued to Google LLC, or Google, and $227.1 million pursuant to a credit agreement with Ares Capital Corporation, or Ares, as amended, for a senior secured loan, or the Term Loan Facility, the principal amount of which was increased by an additional $35.0 million pursuant to an amendment dated October 11, 2023. Our current and future indebtedness, including the Amended Note and the Term Loan Facility may have significant negative effects on our operations, including:

- impairing our ability to obtain additional financing in the future (or to obtain such financing on acceptable terms) for working capital, capital expenditures, acquisitions or other important needs, and

subjecting us to other restrictive covenants that may reduce our ability to take certain corporate actions;

- requiring us to dedicate a portion of our cash resources to the payment of interest and principal, reducing money available to fund working capital, capital expenditures, potential acquisitions, international expansion, new product development, new enterprise relationships and other general corporate purposes;
- requiring us to repay the principal and accrued interest on the Amended Note if we terminate our agreement with Google for use of Google Cloud or as a result of an event of default under the operating covenants in the Amended Note, or requiring us to repay the principal and accrued interest on the Term Loan Facility in an event of default under the covenants of the Term Loan Facility, either of which could impair our liquidity and reduce the availability of our cash flow to fund working capital, capital expenditures, acquisitions and other important needs;
- limiting our ability to adjust to rapidly changing conditions in the industry, reducing our ability to withstand competitive pressures and making us more vulnerable to a downturn in general economic conditions or business than our competitors with relatively lower levels of debt; and
- requiring us, in certain circumstances, to obtain approval from Ares before embarking on certain mergers, acquisitions, capital expenditures, or other operational issues.

We intend to satisfy our current and future debt service obligations with our then existing cash and cash equivalents. However, we may not have sufficient funds, and may be unable to arrange for additional financing, to pay the amounts due under the Term Loan Facility, the Amended Note or any other debt instruments. In addition, the Term Loan Facility and Amended Note contain, and the agreements governing our future indebtedness may contain, restrictive covenants that may limit our ability to engage in activities that may be in our long-term best interest. These restrictive covenants include, among others, financial reporting requirements, limitations on indebtedness, liens, mergers, consolidations, liquidations and dissolutions, sales of assets, investments (including acquisitions), dividends and other restricted payments and transactions with affiliates. Our failure to make payments under or comply with other covenants contained in the documents governing our indebtedness could result in an event of default which, if not cured or waived, could result in the acceleration of substantially all of our debt and potentially the foreclosure on our assets in the event we are unable to repay all amounts owed.

We could be adversely affected by violations of the FCPA and other anti-bribery laws.

We are subject to the FCPA, which prohibits companies and their intermediaries from making payments in violation of law to non-U.S. government officials for the purpose of obtaining or retaining business or securing any other improper advantage, as a result of our international operations. We are also subject to similar anti-bribery laws in the jurisdictions in which we operate, including the United Kingdom's Bribery Act of 2010, which also prohibits commercial bribery and makes it a crime for companies to fail to prevent bribery. These laws are complex and far-reaching in nature, and, as a result, we cannot assure that we would not be required in the future to alter one or more of our practices to be in compliance with these laws or any changes in these laws or the interpretation thereof. Any violations of these laws, or allegations of such violations, could disrupt our operations, involve significant management distraction, cause us to incur significant costs and expenses, including legal fees, and result in a material adverse effect on our business, financial condition and results of operations. We could also suffer severe penalties, including criminal and civil penalties, disgorgement and other remedial measures.

Risks Related to Ownership of Our Class A Common Stock

The dual class structure of our common stock will have the effect of concentrating voting control with our Chief Executive Officer, Founder and Chairman, which will limit your ability to influence the outcome of important decisions.

Our Class B common stock has 30 votes per share and our Class A common stock, which is the stock we are offering hereby, has one vote per share. Our Chief Executive Officer, Founder, and Chairman, Eric Lefkofsky, who, collectively with his controlled entities, holds all our outstanding shares of Class B common stock, will

beneficially own shares representing approximately % of the voting power of our outstanding capital stock following the completion of this offering. As a result, Mr. Lefkofsky will have the ability to control the outcome of matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions, such as a merger or other sale of our company or our assets, even if his stock ownership represents less than 50% of the outstanding aggregate number of shares of our capital stock. This concentration of voting control will limit the ability of other stockholders to influence corporate matters and may cause us to make strategic decisions that could involve risks to you or that may not be aligned with your interests. In addition, Mr. Lefkofsky will serve as an observer on our nominating and corporate governance committee, and accordingly, may have substantial influence over the individuals nominated to serve as directors. As a board member, Mr. Lefkofsky owes a fiduciary duty to our stockholders and is legally obligated to act in good faith and in a manner he reasonably believes to be in the best interests of our stockholders. As a stockholder, Mr. Lefkofsky is entitled to vote his shares in his own interests, which may not always be in the interests of our stockholders generally. Mr. Lefkofsky's control may adversely affect the market price of our Class A common stock.

We have not elected to take advantage of the "controlled company" exemption to the corporate governance rules for publicly listed companies but may do so in the future.

Because our Chief Executive Officer, Founder, and Chairman, Eric Lefkofsky, who, collectively with his controlled entities, holds all our outstanding shares of Class B common stock, will beneficially own shares representing in excess of 50% of the voting power of our outstanding capital stock following the completion of this offering, we are eligible to elect the "controlled company" exemption to the corporate governance rules for publicly listed companies. We have not elected to do so. If we decide to become a "controlled company" under the corporate governance rules for publicly listed companies, we would not be required to have a majority of our board of directors be independent, nor would we be required to have a compensation committee or an independent nominating function. If we choose controlled company status in the future, our status as a controlled company could cause our Class A common stock to be less attractive to certain investors or otherwise harm our trading price.

We cannot predict the impact our dual class structure may have on the market price of our Class A common stock.

We cannot predict whether our dual class structure, combined with the concentrated control of our Chief Executive Officer, Founder and Chairman, who beneficially owns all of the outstanding shares of our Class B common stock, will result in a lower or more volatile market price of our Class A common stock or in adverse publicity or other adverse consequences. Certain index providers have announced restrictions on including companies with multiple-class share structures in certain of their indexes. For example, in July 2017, FTSE Russell and Standard & Poor's announced that they would cease to allow most newly public companies utilizing dual or multi-class capital structures to be included in their indices. Under the announced policies, our dual class capital structure would make us ineligible for inclusion in any of these indices. Given the sustained flow of investment funds into passive strategies that seek to track certain indexes, exclusion from stock indexes would likely preclude investment by many of these funds and could make our Class A common stock less attractive to other investors. As a result, the market price of our Class A common stock could be adversely affected.

No public market for our Class A common stock currently exists, and an active public trading market may not develop or be sustained following this offering.

No public market for our Class A common stock currently exists. An active public trading market for our Class A common stock may not develop following the completion of this offering or, if developed, it may not be sustained. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair value of your shares. An inactive market may also impair our ability to raise capital to continue to fund operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

We will have broad discretion in the use of the net proceeds to us from this offering and may not use them effectively.

We will have broad discretion in the application of the net proceeds to us from this offering, including for any of the purposes described in the section titled "Use of Proceeds," and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, our ultimate use may vary substantially from our currently intended use. Investors will need to rely upon the judgment of our management with respect to the use of proceeds. Pending use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities, such as money market accounts, certificates of deposit, commercial paper, and guaranteed obligations of the U.S. government that may not generate a high yield for our stockholders. We may use a portion of the net proceeds to acquire complementary businesses, products, services, or technologies, or to pay down existing or future debt obligations. At this time, we do not have agreements or commitments to enter into any material acquisitions. If we do not use the net proceeds that we receive in this offering effectively, our business, financial condition and results of operations could be harmed and the market price of our Class A common stock could decline.

Future sales of our Class A common stock in the public market could cause the market price of our Class A common stock to decline.

Sales of a substantial number of shares of our Class A common stock in the public market following the completion of this offering, or the perception that these sales might occur, could depress the market price of our Class A common stock and could impair our ability to raise capital through the sale of additional equity securities. Many of our existing equity holders have substantial unrecognized gains on the value of the equity they hold based upon the price of this offering, and therefore they may take steps to sell their shares or otherwise secure the unrecognized gains on those shares. We are unable to predict the timing of or the effect that such sales may have on the prevailing market price of our Class A common stock.

All of the Class A common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act of 1933, as amended, or the Securities Act, except for any shares held by our affiliates as defined in Rule 144 under the Securities Act, or Rule 144, and shares subject to lock-up agreements described below.

All of our directors and executive officers, the selling stockholders, and the holders of substantially all of our Class A common stock, Class B common stock and securities exercisable for, or convertible into, our Class A common stock outstanding immediately on the closing of this offering, are subject to lock-up agreements with the underwriters or agreements with market stand-off provisions with us pursuant to which they have agreed that they will not, and will not publicly disclose an intention to, during the period ending on the 180th day after the date of this prospectus, or the restricted period, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any of our shares of common stock, any options or warrants to purchase any of our shares of common stock or any securities convertible into or exchangeable for or that represent the right to receive shares of our common stock or enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our common stock; provided that Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC on behalf of the underwriters may release any of the securities subject to these lock-up agreements at any time, subject to the applicable notice requirements.

In addition, the restricted period may be shortened with respect to a portion of the locked-up securities held by certain lock-up parties, and the lock-up agreements are subject to a number of exceptions. These agreements are further described in the sections titled "Shares Eligible for Future Sale" and "Underwriting." If not earlier released, all of the shares of Class A common stock not sold in this offering will become eligible for sale upon expiration of the restricted period, except for any shares held by our affiliates as defined in Rule 144.

In addition, there were 210,000 shares of Class A common stock issuable upon the exercise of a stock option outstanding as of September 30, 2023 and 13,388,209 shares of Class A common stock issuable upon the vesting and settlement of RSUs and PSUs outstanding as of September 30, 2023. AstraZeneca also holds an outstanding warrant, pursuant to which AstraZeneca has the right to purchase $100 million in shares of our Class A common stock at an exercise price equal to the public offering price in this offering. The shares of Class A common stock will become eligible for sale in the public market to the extent such options or warrant are exercised or RSUs and PSUs vested and settled, subject to the lock-up agreements described above and compliance with applicable securities laws. We intend to register all of the shares of Class A common stock issuable upon the vesting and settlement of outstanding RSUs and PSUs, and other equity incentives we may grant in the future, for public resale under the Securities Act.

Further, based on shares outstanding as of September 30, 2023, holders of approximately shares of Class A common stock (assuming the issuance of the Additional Class A Conversion Shares, as discussed under "Prospectus Summary" above, and assuming no exercise of the underwriters' option to purchase additional shares) and approximately shares of Class B common stock, or % of our capital stock after the completion of this offering, will have rights, subject to some conditions, to require us to file registration statements covering the sale of their shares or to include their shares in registration statements that we may file for ourselves or other stockholders.

Sales, short sales, or hedging transactions involving our equity securities, whether before or after this offering and whether or not we believe them to be prohibited, could adversely affect the price of our Class A common stock.

You will experience immediate and substantial dilution in the net tangible book value of the shares of Class A common stock you purchase in this offering.

The initial public offering price of our Class A common stock will be substantially higher than the pro forma net tangible book value per share of our common stock immediately after this offering. If you purchase shares of our Class A common stock in this offering, you will suffer immediate dilution of $ per share, or $ per share if the underwriters exercise their option to purchase additional shares in full, representing the difference between our pro forma as adjusted net tangible book value per share as of September 30, 2023, after giving effect to the sale of Class A common stock in this offering and the assumed public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus. See the section titled "Dilution."

We do not intend to pay dividends for the foreseeable future and, as a result, your ability to achieve a return on your investment will depend on appreciation in the price of our Class A common stock.

While we have in the past paid dividends to holders of our convertible preferred stock, we do not intend to pay any cash dividends in the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our board of directors. Accordingly, you may need to rely on sales of our Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on your investment.

We are an "emerging growth company," and we cannot be certain if the reduced reporting and disclosure requirements applicable to emerging growth companies will make our Class A common stock less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act, and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not "emerging growth companies," including the auditor attestation requirements of Section 404, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of

any golden parachute payments not previously approved. Pursuant to Section 107 of the JOBS Act, as an emerging growth company, we have elected to use the extended transition period for complying with new or revised accounting standards until those standards would otherwise apply to private companies. As a result, our consolidated financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make our Class A common stock less attractive to investors. In addition, if we cease to be an emerging growth company, we will no longer be able to use the extended transition period for complying with new or revised accounting standards.

We will remain an emerging growth company until the earliest of: (1) the last day of the fiscal year following the fifth anniversary of this offering; (2) the last day of the first fiscal year in which our annual gross revenue is $1.235 billion or more; (3) the date on which we have, during the previous rolling three-year period, issued more than $1.0 billion in non-convertible debt securities; and (4) the last day of the fiscal year in which the market value of our Class A common stock held by non-affiliates exceeded $700 million as of June 30 of such fiscal year.

We cannot predict if investors will find our Class A common stock less attractive if we choose to rely on these exemptions. If some investors find our Class A common stock less attractive, there may be a less active trading market for our Class A common stock and our stock price may be more volatile.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of our company more difficult, limit attempts by our stockholders to replace or remove our current management and limit the market price of our Class A common stock.

In addition to the effects of our dual class structure, provisions in our amended and restated certificate of incorporation and amended and restated bylaws, as they will be in effect upon the completion of this offering, may have the effect of delaying or preventing a change in control or changes in our management. Our amended and restated certificate of incorporation and amended and restated bylaws will include provisions that may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally, subject to certain exceptions, prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any "interested" stockholder for a period of three years following the date on which the stockholder became an "interested" stockholder. Any of the foregoing provisions could limit the price that investors might be willing to pay in the future for shares of our Class A common stock, and they could deter potential acquirers of our company, thereby reducing the likelihood that you would receive a premium for your shares of our Class A common stock in an acquisition.

Our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America will be the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our amended and restated certificate of incorporation, as will be in effect upon the completion of this offering, will provide that the Court of Chancery of the State of Delaware is the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative claim or cause of action brought on our behalf;
- any claim or cause of action asserting a breach of fiduciary duty;
- any claim or cause of action against us arising under the Delaware General Corporation Law;

- any claim or cause of action arising under or seeking to interpret our amended and restated certificate of incorporation or our amended and restated bylaws; and
- any claim or cause of action against us that is governed by the internal affairs doctrine.

The provisions would not apply to suits brought to enforce a duty or liability created by the Securities Exchange Act of 1934, or the Exchange Act. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated certificate of incorporation will further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause or causes of action arising under the Securities Act, including all causes of action asserted against any defendant to such complaint. For the avoidance of doubt, this provision is intended to benefit and may be enforced by us, our officers and directors, the underwriters to any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering.

While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such an instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our amended and restated certificate of incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

These exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees. If a court were to find either exclusive-forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur further significant additional costs associated with resolving the dispute in other jurisdictions, all of which could seriously harm our business, financial condition and results of operations.

Our stock price may be volatile, and the value of our Class A common stock may decline.

The market price of our Class A common stock may be highly volatile and may fluctuate or decline substantially as a result of a variety of factors, some of which are beyond our control, including:

- actual or anticipated fluctuations in our financial condition or results of operations;
- variance in our financial performance from expectations of securities analysts;
- changes in the pricing of our products;
- our ability to service or pay down existing or future debt obligations;
- changes in our projected operating and financial results;
- changes in laws or regulations applicable to our Platform and products, including changes in the regulation of data or in the structure of healthcare payment systems;
- announcements by us or our competitors of significant business developments, acquisitions, or new products;
- significant data breaches, disruptions to or other incidents involving our products;
- our involvement in litigation or governmental investigations;

- future sales of our Class A common stock by us or our stockholders, as well as the anticipation of lock-up releases;
- changes in senior management or key personnel;
- the issuance of new or changed securities analysts' reports or recommendations;
- the trading volume of our Class A common stock;
- changes in the anticipated future size and growth rate of our market; and
- economic and market conditions in general, or in our industry in particular.

Broad market and industry fluctuations, as well as general economic, political, regulatory, and market conditions, may also negatively impact the market price of our Class A common stock. In addition, technology stocks have historically experienced high levels of volatility. In the past, companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future, which could result in substantial expenses and divert our management's attention.

If securities or industry analysts do not publish research or publish unfavorable or inaccurate research about our business, the market price and trading volume of our Class A common stock could decline.

The market price and trading volume of our Class A common stock following the completion of this offering will be heavily influenced by the way analysts interpret our financial information and other disclosures. We do not have control over these analysts. If few securities analysts commence coverage of us, or if industry analysts cease coverage of us, our stock price would be negatively affected. If securities or industry analysts do not publish research or reports about our business, downgrade our Class A common stock, or publish negative reports about our business, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our Class A common stock could decrease, which might cause our stock price to decline and could decrease the trading volume of our Class A common stock.

We will incur increased costs as a result of operating as a public company, and our management will be required to devote substantial time to compliance with our public company responsibilities and corporate governance practices.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company, which we expect to further increase after we are no longer an "emerging growth company." The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the Exchange Act, the listing requirements of the Nasdaq Stock Market and other applicable securities rules and regulations impose various requirements on public companies. Our management and other personnel devote a substantial amount of time to compliance with these requirements. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly, such as maintaining directors' and officers' liability insurance. We cannot predict or estimate the amount of additional costs we will incur as a public company or the specific timing of such costs, and any such costs may adversely affect our business, financial condition and results of operations.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations or financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements because they contain words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "will" or "would" or the negative of these words or other similar terms or expressions. These forward-looking statements include, but are not limited to, statements concerning the following:

- the evolving treatment paradigm for cancer, including physicians' use of molecular data and targeted oncology therapeutics and the market size for our current and future products;
- our ability to expand our business beyond oncology into new disease areas;
- estimates of our addressable market and our expectations regarding our revenue, expenses, capital requirements and operating results;
- our ability to develop new products and services, including our goals and strategy regarding development and commercialization of AI Applications;
- our ability to maintain and grow our datasets, including in new disease areas and geographies;
- any expectation that the growth of our datasets will improve the quality of our products and services and accelerate their adoption;
- our ability to capture, aggregate, analyze or otherwise utilize genomic data in new ways and in additional diagnostic modalities;
- any expectation that we will continue to commercialize de-identified records and license them to multiple customers;
- the acceptance of our publications in peer-reviewed journals or of our presentations at scientific and medical conference presentations;
- the implementation of our business model and strategic plans for our products, technologies and businesses;
- competitive companies and technologies and our industry;
- the potential of Intelligent Diagnostics to be disruptive across a broad set of disease areas and the clinical trial process;
- our ability to manage and grow our business by expanding our sales to existing customers or introducing our products to new customers;
- third-party payer reimbursement and coverage decisions, including our strategy to increase reimbursement;
- our ability to establish and maintain intellectual property protection for our products or avoid claims of infringement;
- potential effects of evolving and/or extensive government regulation;
- the timing or likelihood of regulatory filings and approvals;
- our ability to hire and retain key personnel;
- our ability to expand internationally;

- our ability to protect and enforce our intellectual property rights, including our trade secret protected proprietary rights in our platform;
- our ability to service or pay down existing or future debt obligations;
- our anticipated cash needs and our needs for additional financing; and
- anticipated trends and challenges in our business and the markets in which we operate.

You should not rely on forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this prospectus primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition and operating results. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described in the section titled "Risk Factors" and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus. The results, events and circumstances reflected in the forward-looking statements may not be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this prospectus. And while we believe that information provides a reasonable basis for these statements, that information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain, and investors are cautioned not to unduly rely on these statements.

The forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this prospectus to reflect events or circumstances after the date of this prospectus or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments.

MARKET, INDUSTRY AND OTHER DATA

This prospectus contains statistical data, estimates and forecasts that are based on independent industry publications or other publicly available information, as well as other information based on our internal sources. While we believe the industry and market data included in this prospectus are reliable and are based on reasonable assumptions, these data involve many assumptions and limitations, and you are cautioned not to give undue weight to these estimates. We have not independently verified the accuracy or completeness of the data contained in these industry publications and other publicly available information. None of the industry publications referred to in this prospectus were prepared on our or on our affiliates' behalf or at our expense. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the sections titled "Risk Factors" and "Special Note Regarding Forward-Looking Statements." Among other items, certain of the market research included in this prospectus was published prior to the outbreak of the COVID-19 pandemic and did not anticipate the virus or the impact it has caused on our industry. We have utilized this pre-pandemic market research in the absence of updated sources. These and other factors could cause results to differ materially from those expressed in the projections and estimates made by the independent third parties and us. See the section titled "Risk Factors—Risks Related to Our Business and Strategy—The sizes of the markets for our current and future products have not been established with precision, and may be smaller than we estimate."

The sources of certain statistical data, estimates and forecasts contained in this prospectus are the following independent industry publications, reports and other publicly available information:

- Mordor Intelligence, Biomarkers Market—Growth, Trends, COVID-19 Impact, and Forecast (2022-2027), 2022
- Mordor Intelligence, Clinical Trials Market—Growth, Trends, COVID-19 Impact, and Forecast (2022-2027), 2022
- Evaluate Pharma, World Preview 2022, Outlook to 2028, October 2022
- American Clinical Laboratory Association, Value of Lab Testing, 2022
- National Cancer Institute, Cancer Statistics, November 2022
- ClinicalTrials.gov database, 2022: U.S. National Library of Medicine
- GLOBOCAN 2022 database, 2022: Global Cancer Observatory
- National Institute of Mental Health, Major Depression, January 2022
- Anxiety & Depression Association of America, Facts & Statistics, 2021
- Cancers (Basel), PARP Inhibitors in the Treatment of Early Breast Cancer: The Step Beyond?, June 2020
- Gynecologic Oncology, Frequencies of BRCA1 and BRCA2 Mutations Among 1,342 Unselected Patients with Invasive Ovarian Cancer, May 2011
- Journal of Oncology, BRCA Mutations in Prostate Cancer: Prognostic and Predictive Implications, 2020
- World Journal of Urology, Efficacy of Routine Follow-up After First-Line Treatment of Testicular Cancer, October 2004
- The Global Economic Burden of Non-communicable Diseases, Harvard School of Public Health, World Economic Forum (September 2011)
- Mental Health and Substance Use, Mental Health in the Workplace, World Health Organization

- World Cancer Report 2014, International Agency for Research on Cancer, World Health Organization (2014)
- CoronavirusUpdate: COVID-19 likely to cost economy $1 trillion during 2020, says UN trade agency, United Nations, UN News (March 9, 2020)
- American Cancer Society, Cancer Treatment & Survivorship Facts & Figures 2022-2024, 2022
- The Cancer Atlas, The Burden of Cancer, 2019.

USE OF PROCEEDS

We estimate that we will receive net proceeds from this offering of approximately $ million based on an assumed initial public offering price of $ per share of Class A common stock, the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We will not receive any of the proceeds from any sale of Class A common stock in this offering by the selling stockholders identified in this prospectus in the event that the underwriters exercise their option to purchase additional shares to cover over-allotments, although we will pay the expenses, other than the underwriting discounts and commissions, associated with the sale of those shares.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share of Class A common stock, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of Class A common stock offered by us would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming the assumed initial public offering price of $ per share of Class A common stock remains the same, and after deducting estimated underwriting discounts and commissions.

The principal purposes of this offering are to increase our capitalization and financial flexibility, create a public market for our Class A common stock and facilitate our future access to the capital markets. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. However, we currently intend to use the net proceeds we receive from this offering for general corporate purposes, including working capital, operating expenses and capital expenditures. We may also use a portion of the net proceeds to acquire complementary businesses, products, services or technologies, or to pay down existing debt obligations. At this time, we do not have agreements or commitments to enter into any material acquisitions.

As of September 30, 2023, there was $227.1 million gross principal amount outstanding under the Term Loan Facility. As of September 30, 2023, the interest rate on the Term Loan Facility was 10.5%. The Term Loan Facility was entered into in September 2022, and subsequently amended in April 2023, to provide working capital and for general corporate purposes, including to finance growth initiatives and pay for operating expenses. In October 2023, we entered into a second amendment pursuant to which the aggregate principal amount of the Term Loan facility was increased by an additional $35.0 million.

We will have broad discretion over how to use the net proceeds to us from this offering. We intend to invest the net proceeds to us from this offering that are not used as described above in investment-grade, interest-bearing instruments.

DIVIDEND POLICY

Since our incorporation in 2015, we have paid an aggregate of $32.5 million in cash dividends and issued 47,965 shares of Series G-3 convertible preferred stock as paid-in-kind dividends to holders of our preferred stock in satisfaction of dividend obligations accruing pursuant to our certificate of incorporation in effect prior to this offering. As of the date of this prospectus, shares of our convertible preferred stock have accrued approximately $ million in unpaid dividends, which are payable, at our option, in cash or shares of our common stock. We expect to pay these dividends in shares of our common stock in connection with the closing of this offering. See "Prospectus Summary—The Offering" for more information about shares of common stock to be issued in satisfaction of these dividend obligations.

Our amended and restated certificate of incorporation to be in effect upon the closing of this offering will not provide for accruing dividends. We currently intend to retain all available funds and future earnings, if any, to fund the development and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination regarding the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash, cash equivalents and restricted cash and capitalization as of September 30, 2023:

- on an actual basis;
- on a pro forma basis, giving effect to (1) the Series G-4 Financing; (2) the automatic conversion of all of our outstanding shares of Series B redeemable convertible preferred stock into 5,374,899 shares of Class B common stock, which will occur upon the closing of this offering; (3) the automatic conversion of all of our outstanding shares of redeemable convertible preferred stock, other than our Series B preferred stock, into shares of Class A common stock, which will occur upon the closing of this offering, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus; (4) the issuance of Additional Class A Conversion Shares, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, which will occur upon the conversion of all outstanding shares of our redeemable convertible preferred stock and upon the closing of this offering; (5) the automatic conversion of all of our nonvoting common stock into 4,917,823 shares of Class A common stock, which will occur upon the closing of this offering; (6) the issuance of 13,388,209 shares of Class A common stock upon settlement of RSUs and PSUs for which the service-based vesting condition was satisfied on or before September 30, 2023 and for which the performance-based vesting condition will be satisfied in connection with this offering, which settlement will occur upon the expiration of the lock-up period in connection with this offering; (7) stock-based compensation expense of approximately $545.4 million related to the vesting of RSUs and PSUs for which the service-based vesting condition was satisfied on or before September 30, 2023 and for which the performance-based vesting condition will be satisfied in connection with this offering, as further described in Note 10 to our consolidated financial statements included elsewhere in this prospectus; and (8) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur upon the closing of this offering; and
- on a pro forma as adjusted basis, giving effect to (1) the pro forma adjustments set forth above and (2) our receipt of $ million in net proceeds from the sale of shares of Class A common stock that we are offering at an assumed initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

See “Prospectus Summary—The Offering” for a description of the Additional Class A Conversion Shares, as the number of Additional Class A Conversion Shares that will be issued depends on the initial public offering price of our Class A common stock.

You should read this table together with the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes included elsewhere in this prospectus.

	As of September 30, 2023		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands except share and per share amounts)		
Cash, cash equivalents and restricted cash	$ 133,528		
Convertible promissory note	198,874		
Long term debt, net	220,485		
Redeemable convertible preferred stock, $0.0001 par value, 65,441,289 shares authorized, 62,740,708 shares issued and outstanding, actual; shares authorized, issued and outstanding, pro forma and pro forma as adjusted	1,051,637		
Stockholders' (deficit) equity:			
Preferred stock, $0.0001 par value, no shares authorized, issued, and outstanding, actual; shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—		
Non-voting Common Stock, $0.0001 par value, 66,946,627 shares authorized, 5,063,289 shares issued and 4,917,823 shares outstanding, actual; shares authorized, issued and outstanding, pro forma and pro forma as adjusted	0		
Class A common stock, $0.0001 par value, 181,700,285 shares authorized 58,367,961 shares issued and outstanding, actual; shares authorized, issued and outstanding, pro forma and pro forma as adjusted	6		
Class B common stock, $0.0001 par value, 5,374,899 shares authorized no shares issued and outstanding, actual; shares authorized, issued and outstanding, pro forma and pro forma as adjusted	0		
Treasury stock, 145,466 shares, at cost, pro forma and pro forma as adjusted	(3,602)		
Additional paid-in capital	13,556		
Accumulated other comprehensive (loss) income	(11)		
Accumulated deficit	(1,334,646)		
Total stockholders' (deficit) equity:	$ (1,324,697)		
Total capitalization	$ 146,299		

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share of Class A common stock, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) each of our pro forma as adjusted cash, cash equivalents and restricted cash, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by approximately $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of Class A common stock offered by us would increase (decrease) each of our pro forma as adjusted cash, cash equivalents and restricted cash, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by approximately $ million, assuming the assumed initial public offering price of $ per share of Class A common stock remains the same, and after deducting estimated underwriting discounts and commissions.

The number of shares of Class A common stock and Class B common stock that will be outstanding immediately after this offering as noted above is based on shares of Class A common stock and 5,374,899 shares of Class B common stock outstanding as of September 30, 2023 (after giving effect to the Series G-4 Financing and assuming the conversion of all outstanding shares of redeemable convertible preferred stock, other than our Series B redeemable convertible preferred stock and non-voting common stock into Class A

common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, which will occur upon the closing of this offering, and all outstanding shares of Series B redeemable convertible preferred stock into Class B common stock), and excludes:

- 7,348,936 shares of Class A common stock issuable on the vesting and settlement of RSUs and PSUs outstanding as of September 30, 2023 under our 2015 Plan, for which the performance-based vesting condition will be satisfied in connection with this offering, but for which the service-based vesting condition will not be satisfied on or before September 30, 2023;
- 10,000,000 shares of Class A common stock reserved for future issuance under our 2024 Plan, as well as any future increases, including annual automatic evergreen increases, in the number of shares of Class A common stock reserved for issuance under the 2024 Plan;
- 3,000,000 shares of Class A common stock reserved for future issuance under the ESPP, as well as any future increases, including annual automatic evergreen increases, in the number of shares of Class A common stock reserved for issuance under the ESPP;
- 210,000 shares of Class A common stock issuable on the exercise of a stock option outstanding as of September 30, 2023 under the 2015 Plan, with an exercise price of $0.8542 per share;
- shares of Class A common stock issuable upon conversion of the Amended Note, which is convertible beginning in March 2026 into a number of shares determined by dividing (i) the then outstanding principal amount of such note (which was $198.9 million as of September 30, 2023) plus accrued and unpaid interest by (ii) the average of the last trading price of the Company's Class A common stock on each trading day during the twenty day period ending immediately prior to March 22, 2026, as more fully described in the section of this prospectus titled "Description of Capital Stock—Convertible Promissory Note";
- shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, issuable upon the exercise of the warrant issued to AstraZeneca with an exercise price equal to the initial public offering price, as more fully described in the section of this prospectus titled "Business—Operations—Our Strategic Collaboration with AstraZeneca";
- up to $ million in shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, issuable to one of our stockholders pursuant to a contingent payment right, which payment may be made in cash or shares of Class A common stock, upon mutual agreement of the Company and such stockholder; and
- the expected issuance on or around March 11, 2024 of 8,724 shares of Class A common stock to former stockholders of Mpirik in connection with our purchase of all of the outstanding shares of Mpirik. See Notes 3 and 12 to our consolidated financial statements included elsewhere in this prospectus.

DILUTION

If you invest in our Class A common stock in this offering, your interest will be diluted to the extent of the difference between the initial public offering price per share of Class A common stock and the pro forma as adjusted net tangible book value per share immediately after this offering.

Our historical net tangible book value (deficit) as of September 30, 2023 was $(1,419.6) million, or $(22.43) per share. Our historical net tangible book value (deficit) per share represents the amount of our total tangible assets less our total liabilities and the carrying value of our redeemable convertible preferred stock, which is not included within stockholders' equity, divided by the 63,285,634 shares of common stock outstanding as of September 30, 2023. Our pro forma net tangible book value as of September 30, 2023 was $ million, or $ per share. Our pro forma net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by the number of our shares of common stock outstanding as of September 30, 2023, after giving effect to (1) the Series G-4 Financing; (2) the automatic conversion of all outstanding shares of our Series B redeemable preferred stock into 5,374,899 shares of Class B common stock, which will occur upon the closing of this offering; (3) the automatic conversion of all outstanding shares of our redeemable convertible preferred stock, other than our Series B preferred stock, into an aggregate of shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, which will occur upon the closing of this offering; (4) the issuance of Additional Class A Conversion Shares, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, which will occur upon the conversion of all outstanding shares of our redeemable convertible preferred stock and upon the closing of this offering; (5) the automatic conversion of all of our nonvoting common stock into 4,917,823 shares of Class A common stock, which will occur upon the closing of this offering; (6) the issuance of 13,388,209 shares of Class A common stock upon settlement of RSUs and PSUs for which the service-based vesting condition was satisfied on or before September 30, 2023 and for which the performance-based vesting condition will be satisfied in connection with this offering, which settlement will occur upon the expiration of the lock-up period in connection with this offering; (7) stock-based compensation expense of approximately $545.4 million related to the vesting of RSUs and PSUs for which the service-based vesting condition was satisfied on or before September 30, 2023 and for which the performance-based vesting condition will be satisfied in connection with this offering, as further described in Note 10 to our consolidated financial statements included elsewhere in this prospectus; and (8) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur upon the closing of this offering. See "Prospectus Summary—The Offering" for a description of the Additional Class A Conversion Shares, as the number of Additional Class A Conversion Shares that will be issued depends on the initial public offering price of our Class A common stock.

After giving effect to the sale by us of shares of Class A common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2023 would have been $ million, or $ per share. This amount represents an immediate increase in pro forma as adjusted net tangible book value of $ per share to our existing stockholders and an immediate dilution of $ per share to new investors purchasing Class A common stock in this offering. We determine dilution by subtracting the pro forma as adjusted net tangible book value per share after this

offering from the initial public offering price per share paid by investors purchasing Class A common stock in this offering. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$
Historical net tangible book value (deficit) per share as of September 30, 2023	$(22.43)	
Increase per share attributable to the pro forma adjustments described above		
Pro forma net tangible book value per share as of September 30, 2023		
Increase in pro forma as adjusted net tangible book value per share attributable to new investors purchasing shares in this offering		
Pro forma as adjusted net tangible book value per share after giving effect to this offering		
Dilution per share to new investors in this offering		$

The dilution information discussed above is illustrative only and may change based on the actual initial public offering price and other terms of this offering. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share of Class A common stock, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) our pro forma as adjusted net tangible book value per share by $ per share and increase (decrease) the dilution to new investors by $ per share, in each case assuming the number of shares of Class A common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of Class A common stock offered by us would increase (decrease) our pro forma as adjusted net tangible book value by approximately $ per share and decrease (increase) the dilution to new investors by approximately $ per share, in each case assuming the assumed initial public offering price of $ per share of Class A common stock remains the same, and after deducting estimated underwriting discounts and commissions.

The following table summarizes, as of September 30, 2023, on a pro forma as adjusted basis as described above, the aggregate number of shares of our Class A common stock and Class B common stock, the total consideration and the average price per share (1) paid to us by existing stockholders, and (2) to be paid by new investors acquiring our Class A common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%		%	$
New investors					$
Totals		100.0%	$	100.0%	

Sales by the selling stockholders upon the exercise in full of the underwriters' option to purchase additional shares to cover over-allotments, if any, would cause the number of shares held by existing stockholders to be reduced to shares, or % of the total number of shares of our capital stock outstanding following the closing of this offering, and would increase the number of shares held by new investors to shares, or % of the total number of shares of our capital stock outstanding following the closing of this offering.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) the total consideration paid by new investors and total consideration paid by all stockholders by

$ million, assuming that the number of shares of Class A common stock offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of Class A common stock offered by us would increase (decrease) the total consideration paid by new investors and total consideration paid by all stockholders by $ million, assuming the assumed initial public offering price of $ per share of Class A common stock remains the same, and after deducting estimated underwriting discounts and commissions.

The number of shares of Class A common stock and Class B common stock that will be outstanding immediately after this offering as noted above is based on shares of Class A common stock and 5,374,899 shares of Class B common stock outstanding as of September 30, 2023 (after giving effect to the Series G-4 Financing and assuming the conversion of all outstanding shares of redeemable convertible preferred stock, other than our Series B redeemable convertible preferred stock and non-voting common stock into Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, and all outstanding shares of Series B redeemable convertible preferred stock into Class B common stock), and excludes:

- 7,348,936 of Class A common stock issuable on the vesting and settlement of RSUs and PSUs outstanding as of September 30, 2023 under our 2015 Plan, for which the performance-based vesting condition will be satisfied in connection with this offering, but for which the service-based vesting condition will not be satisfied on or before September 30, 2023;
- 10,000,000 shares of Class A common stock reserved for future issuance under our 2024 Plan, as well as any future increases, including annual automatic evergreen increases, in the number of shares of Class A common stock reserved for issuance under the 2024 Plan;
- 3,000,000 shares of Class A common stock reserved for future issuance under the ESPP, as well as any future increases, including annual automatic evergreen increases, in the number of shares of Class A common stock reserved for issuance under the ESPP;
- 210,000 shares of Class A common stock issuable on the exercise of a stock option outstanding as of September 30, 2023 under the 2015 Plan, with an exercise price of $0.8542 per share;
- shares of Class A common stock issuable upon conversion of the Amended Note, which is convertible beginning in March 2026 into a number of shares determined by dividing (i) the then outstanding principal amount of such note (which was $198.9 million as of September 30, 2023) plus accrued and unpaid interest by (ii) the average of the last trading price of the Company's Class A common stock on each trading day during the twenty day period ending immediately prior to March 22, 2026, as more fully described in the section of this prospectus titled "Description of Capital Stock—Convertible Promissory Note";
- shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, issuable upon the exercise of the warrant issued to AstraZeneca with an exercise price equal to the initial public offering price, as more fully described in the section of this prospectus titled "Business—Operations—Our Strategic Collaboration with AstraZeneca";
- up to $ million in shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, issuable to one of our stockholders pursuant to a contingent payment right, which payment may be made in cash or shares of Class A common stock, upon mutual agreement of the Company and such stockholder; and
- the expected issuance on or around March 11, 2024 of 8,724 shares of Class A common stock to former stockholders of Mpirik, Inc., or Mpirik, in connection with our purchase of all of the outstanding shares of Mpirik. See Notes 3 and 12 to our consolidated financial statements included elsewhere in this prospectus.

To the extent that any outstanding options are exercised, outstanding RSUs vest and settle or new options or RSUs are issued under our stock-based compensation plans, or we issue additional shares of Class A common stock in the future, there will be further dilution to investors participating in this offering. If all outstanding options under the 2015 Plan and RSUs under the 2015 Plan as of September 30, 2023 were exercised or vested and settled, as applicable, then our existing stockholders, including the holders of these options and RSUs, would own % and our new investors would own % of the total number of shares of our Class A common stock and Class B common stock outstanding on the closing of this offering.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and related notes included elsewhere in this prospectus. Some of the information contained in this discussion and analysis, including information with respect to our planned investments in our sales and marketing, research and development, and general and administrative functions, includes forward-looking statements that involve risks and uncertainties. You should review the sections titled "Special Note Regarding Forward-Looking Statements" and "Risk Factors" for a discussion of forward-looking statements and important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

Tempus is a technology company focused on healthcare that straddles two converging worlds. We strive to combine deep healthcare expertise, providing next-generation diagnostics across multiple disease areas, with leading technology capabilities, harnessing the power of data and analytics to help personalize medicine. We endeavor to unlock the true power of precision medicine by creating Intelligent Diagnostics through the practical application of artificial intelligence, or AI, in healthcare. Intelligent Diagnostics use AI, including generative AI, to make laboratory tests more accurate, tailored, and personal. Unlike traditional diagnostic labs, we can incorporate unique patient information, such as clinical, molecular, and imaging data, with the goal of making our tests more intelligent and our results more insightful. Unlike other technology companies, we are deeply rooted in clinical care delivery as one of the largest sequencers of cancer patients, and patients with other diseases, in the United States. Straddling both worlds is advantageous as we believe Intelligent Diagnostics represent the future of precision medicine, informing more personalized and data-driven therapy selection and development. We believe their adoption could empower physicians to deliver better care and researchers to develop more precise therapies, with the potential to save millions of lives.

In order to bring AI to healthcare at scale, we believe the foundation of how data flows throughout the ecosystem needs to be rebuilt. We established new data pipes, going to and from providers, to allow for the free exchange of data between physicians, who interpret data, and diagnostic and life science companies, who provide data, integrating relevant clinical data, such as outcomes, or adverse events, which are essential for many clinical decisions. Without this capability, we believe that data would continue to accumulate without impacting patient care. To accomplish this, we built both a technology platform to free healthcare data from silos and an operating system to make this data useful, the combination of which we refer to as our Platform. Our Platform connects multiple stakeholders within the larger healthcare ecosystem, often in real time, to assemble and integrate the data we collect, thereby providing an opportunity for physicians to make data-driven decisions in the clinic and for researchers to discover and develop therapeutics. We aim to help physicians find the best therapies for their patients, help pharmaceutical and biotechnology companies make the best drugs possible, and enable patients to access emerging therapies and clinical trials when appropriate.

We primarily operate in the United States and generated total revenue of $257.9 million and $320.7 million in the years ended December 31, 2021 and 2022, respectively, and $220.0 million and $384.1 million in the nine months ended September 30, 2022 and 2023, respectively. In the years ended December 31, 2021 and 2022 and the nine months ended September 30, 2022 and 2023, revenue from one customer accounted for 7.2%, 8.3%, 6.9% and 7.5% of our total revenues, respectively. In the nine months ended September 30, 2023, revenue from one other customer accounted for approximately 5.4% of our total revenues. The same customer did not represent a significant portion of total revenues for the years ended December 31, 2021 and 2022 or for the nine months ended September 30, 2022. In the nine months ended September 30, 2022, revenue from two other customers accounted for approximately 5.3% and 5.1% of our total revenues, respectively. The same two customers did not represent a significant portion of total revenues for the years ended December 31, 2021 and 2022, or for the nine months ended September 30, 2023. We also incurred net losses of $259.2 million and $289.8 million in the years

ended December 31, 2021 and 2022, respectively, and net losses of $223.5 million and $163.6 million in the nine months ended September 30, 2022 and 2023, respectively.

Our Business Model

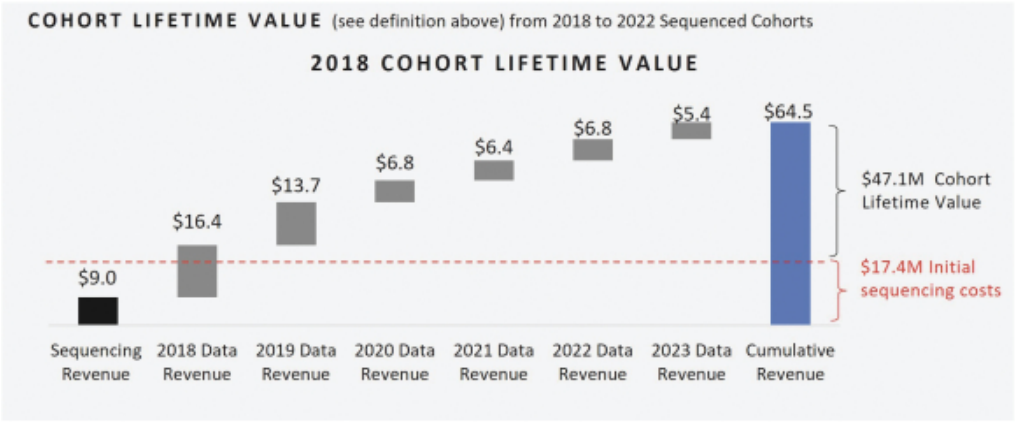
We currently offer three product lines: Genomics, Data, and AI Applications. Each product line is designed to enable and enhance the others, thereby creating network effects in each of the markets in which we operate. We are able to commercialize records multiple times, both at the time a test is run and thereafter. As a result, we differ from traditional diagnostic companies that need to focus on maximizing gross profit when performing a test. At its core, our business model consists of generating, ingesting and structuring vast amounts of multimodal data through our Genomics product line and commercializing de-identified copies of such data through partnerships with our pharmaceutical customers to aid their drug discovery and development efforts.

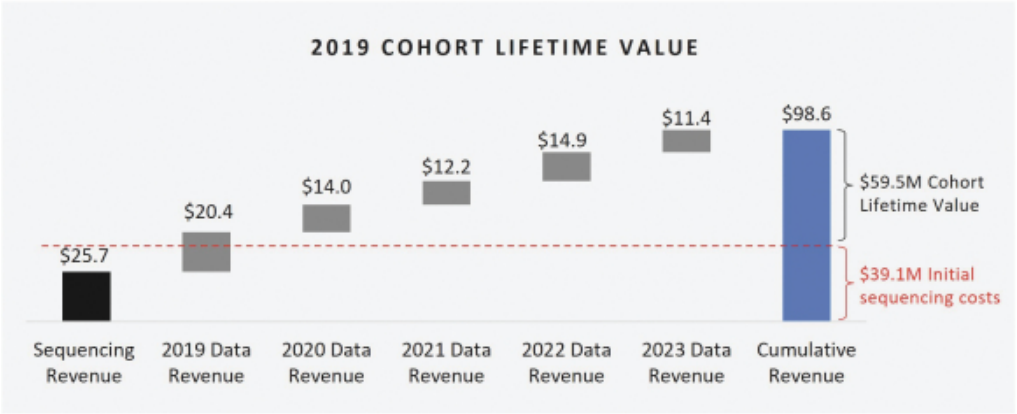
We invest in our database by generating high-quality molecular data and ingesting and structuring the longitudinal clinical records for many of the patients we sequence. While this investment in our business model comes with additional upfront costs, these investments benefit key stakeholders in the healthcare ecosystem over time:

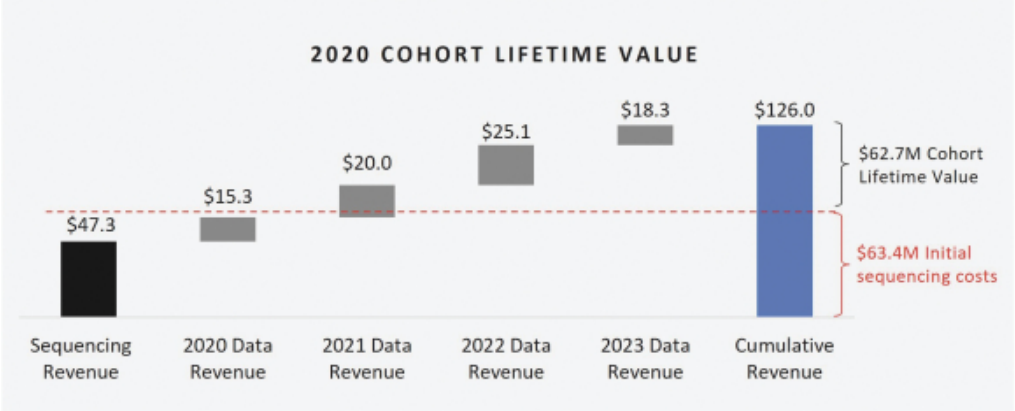
- Healthcare providers benefit from a tailored test result that provides information that can be used in routing patients to the most effective therapy.
- Pharmaceutical and biotechnology companies benefit by licensing deep molecular data and longitudinal clinical data that they can leverage in their drug development efforts.
- We benefit by leveraging the multimodal data to make our current tests more precise and/or to develop new algorithmic tests in the future.

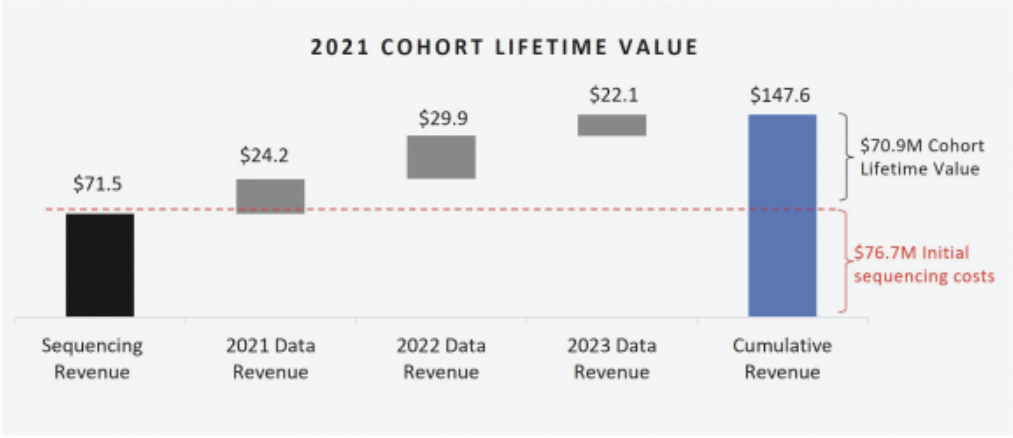
Although we are only eight years old, the network effects described above have already been demonstrated with the cohort of records that were added to our database from 2018 to 2022. To illustrate one of the ways that our business model differs from traditional diagnostic companies, we present below the "Cohort Lifetime Value" derived from records in our de-identified dataset based on the year of data generation. We define "Cohort Lifetime Value" as the cumulative revenue attributable to a specific cohort of de-identified records, including revenue derived both from the initial sequencing (Genomics) and licensing and related services (Data and services), less the initial sequencing costs incurred to generate the data ultimately licensed. In 2018, the first full year that we operated a laboratory, we sequenced samples from approximately 7,500 patients. From that 2018 cohort of sequenced patients, through September 30, 2023, we generated $64.5 million of combined revenue from sequencing, data licensing of de-identified data derived from those records, analytical services, and clinical trials matching, which is approximately 7.2 times the revenue we received from sequencing of that cohort in the initial year. The total cost to sequence the 2018 cohort was $17.4 million, of which $9.0 million was covered by reimbursement for the corresponding sequencing tests. We then generated $16.4 million of data revenue from that cohort in 2018, finishing the year with a "Cohort Lifetime Value" of $8.0 million. As more customers licensed de-identified records from the 2018 cohort in subsequent years, we generated additional revenue in 2019, 2020, 2021 and 2022 from the 2018 cohort, and as of September 30, 2023, the 2018 "Cohort Lifetime Value" was $47.1 million. We experienced similar trends for the 2019, 2020, 2021, and 2022 cohorts. As of September 30, 2023, the 2019 "Cohort Lifetime Value" was $59.5 million, the 2020 "Cohort Lifetime Value" was $62.7 million, the 2021 "Cohort Lifetime Value" was $70.9 million, and the 2022 "Cohort Lifetime Value" was $75.4 million.

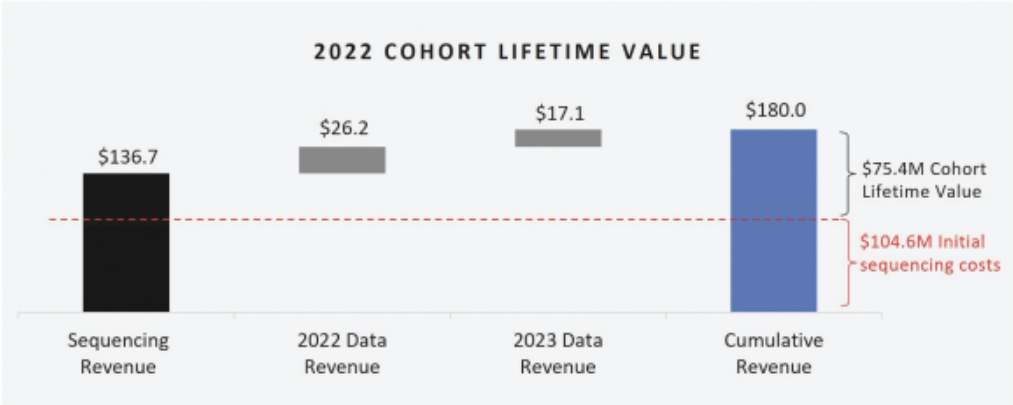
The below charts, which illustrate the "Cohort Lifetime Values" from 2018 to 2022 (with figures shown in "2023 Data Revenue" representing revenue through September 30, 2023) demonstrate that we are not only able to generate revenue when we run an assay, but that we are also able to continue to commercialize the de-identified records for years following running the initial test. As a result, our focus is driving growth in our Genomics product line, which creates the opportunity to drive further growth in our other product lines.


COHORT LIFETIME VALUE (see definition above) from 2018 to 2022 Sequenced Cohorts
2018 COHORT LIFETIME VALUE
$9.0
$16.4
$13.7
$6.8
$6.4
$6.8
$5.4
$64.5
$47.1M Cohort Lifetime Value
$17.4M Initial sequencing costs
Sequencing Revenue
2018 Data Revenue
2019 Data Revenue
2020 Data Revenue
2021 Data Revenue
2022 Data Revenue
2023 Data Revenue
Cumulative Revenue


2019 COHORT LIFETIME VALUE
$25.7
$20.4
$14.0
$12.2
$14.9
$11.4
$98.6
$59.5M Cohort Lifetime Value
$39.1M Initial sequencing costs
Sequencing Revenue
2019 Data Revenue
2020 Data Revenue
2021 Data Revenue
2022 Data Revenue
2023 Data Revenue
Cumulative Revenue


2020 COHORT LIFETIME VALUE
$47.3
$15.3
$20.0
$25.1
$18.3
$126.0
$62.7M Cohort Lifetime Value
$63.4M Initial sequencing costs
Sequencing Revenue
2020 Data Revenue
2021 Data Revenue
2022 Data Revenue
2023 Data Revenue
Cumulative Revenue





Below is a description of each product line:

Genomics

Our Genomics product line leverages our state-of-the-art laboratories to provide next generation sequencing, or NGS, diagnostics, polymerase chain reaction, or PCR, profiling, molecular genotyping and other anatomic and molecular pathology testing to healthcare providers, pharmaceutical companies, biotechnology companies, researchers, and other third parties.

When providing services to healthcare providers, we typically bill commercial payers or government-funded programs (i.e., Medicare and Medicaid) after delivering a test result. We typically operate as an out-of-network provider and the amount that we charge varies depending on the assay being run, the party being billed and other information about the patient's diagnosis. Revenue is generally recognized when we have met the performance obligation relating to an order. We have determined our sole performance obligation to be the delivery of the testing results to the ordering party.

When providing services to pharmaceutical companies, biotechnology companies, researchers, or other third parties, we will invoice the third party after delivering a test result. The amount that is invoiced and recognized as revenue is based on the sequencing of patient samples pursuant to contract terms.

Genomics revenue was $195.0 million and $198.0 million for the years ended December 31, 2021 and 2022, respectively, and $140.1 million and $270.8 million for the nine months ended September 30, 2022 and 2023, respectively. COVID-19 PCR testing accounted for $94.7 million and $22.2 million of revenue for the years ended December 31, 2021 and 2022, respectively, and $17.5 million for the nine months ended September 30, 2022. COVID-19 PCR testing was $2.7 million, or 0.7% of total revenue, for the nine months ended September 30, 2023, as we stopped offering these tests in the first quarter of 2023.

Oncology NGS tests delivered for the years ended December 31, 2019, 2020, 2021 and 2022 were approximately 24,300, 44,700, 69,200 and 100,100, respectively.

Data and Services

The data generated in our lab or ingested into our Platform as part of the Genomics product line is structured and de-identified, prior to commercialization. This de-identified database is then commercialized to our pharmaceutical and biotechnology partners to facilitate drug discovery and development through two primary Data and Services products, Insights and Trials.

Through our Insights product, we license libraries of linked clinical, molecular, and imaging de-identified data and provide a suite of analytical services to analytic and cloud-and-compute tools to pharmaceutical and biotechnology companies. Licensing fee prices are consistent across customers and priced based on the characteristics of the data being provided (i.e., number of clinical fields, type of data modalities, etc.). Revenue from our Insights product is generally recognized upon the delivery of licensed records, upon the completion of performance obligations for related services, or ratably over time in the case of subscriptions.

Our Trials product is designed to leverage the broad network of physicians we work with in oncology to provide clinical trial matching services for pharmaceutical companies that are looking to reach hard-to-find and underserved patient populations. This product is built on top of our real-time data feeds and harnesses AI to accelerate the connection between patients, clinical trial providers (hospitals), and clinical trial sponsors (life sciences companies). The fees charged to sponsors are typically fixed and based on a per match and/or per enrollment basis. Revenue from our Trials product is generally recognized upon a match between a patient and a trial in our network or upon enrollment of a patient that we matched to a trial in our network.

We also provide other clinical trial services and conduct our own studies as part of our Trials program, all with a goal of identifying new therapies and bringing them to market more efficiently. In January 2022, we acquired Highline Consulting, LLC, or Highline, a contract research organization, or CRO, which we subsequently renamed Tempus Compass. Tempus Compass manages and executes early and late-stage clinical trials, primarily in oncology. We also partner with life sciences companies to sponsor studies of drugs, devices, and diagnostics, integrating our life science solutions to help bring new drugs to market faster. The products and services within our Trials program complement each other to create a suite of integrated solutions for life sciences companies from early discovery to commercialization.

Data and services revenue was $62.8 million and $122.7 million for the years ended December 31, 2021 and 2022, respectively, and $80.0 million and $113.3 million for the nine months ended September 30, 2022 and 2023, respectively. Our Data and services revenue is typically back-weighted towards the second half of the year based on the budgeting cycles of our customers.

AI Applications

Our third product line, AI Applications, is focused on developing and providing diagnostics that are algorithmic in nature, implementing new software as a medical device, and building and deploying clinical decision support tools. The primary product of AI Applications is currently “Next,” an AI platform that leverages machine learning to apply an “intelligent layer” onto routinely generated data to proactively identify and

minimize care gaps for oncology and cardiology patients. As this product gains adoption, we intend to leverage large language models, generative AI algorithms, and our vast database of de-identified data to develop algorithmic diagnostics designed to identify these patients earlier in their disease progression, when treatments are most effective.

We launched our Algos product line in the fourth quarter of 2020 and currently offer a suite of algorithmic tests in oncology: our Tumor Origin, TO, test, our Homologous Recombination Deficiency, HRD, test, and our Dihydropyrimidine Dehydrogenase Deficiency, DPYD, test. Prior to January 1, 2023, we would typically bill commercial payers or government-funded programs (i.e., Medicare and Medicaid) after delivering a test result, similar to our Genomics product line. The amount that we would charge varied depending on the algorithms being run, the party being billed and other information about the patient's diagnosis. Revenue was generally recognized based on estimated cash receipts determined by historical and current payment trends. We reported our Algos revenue within our Data and services product line. Beginning January 1, 2023, these three Algos are no longer being billed as individual tests as there is now a dedicated CPT code associated with the underlying laboratory diagnostic. Instead, we submit claims for the diagnostic, and revenues associated with those claims will be reported in our Genomics product line.

Through our acquisitions of Mpirik and Arterys, Inc., we also have algorithmic solutions in market to identify potential care gaps and identify at-risk patients in cardiology. To date, revenues from these offerings are derived from the institution deploying the solutions.

While our AI Applications product line does not currently generate significant revenue, we believe it represents a significant opportunity for us and we will incur significant expenses over the next several years as we work to identify and develop algorithms that we can deploy into a clinical setting.

Strategic Collaborations

AstraZeneca

In November 2021, we entered into a Master Services Agreement, or the MSA, with, and issued a warrant to, AstraZeneca AB, or AstraZeneca. Under the MSA, we agreed, on a non-exclusive basis, to provide AstraZeneca with certain of our products and services, including licensed data, sequencing, clinical trial matching, organoid modeling services, algorithm development, and others. In exchange for certain discounted prices, AstraZeneca has committed to spend a minimum of $200 million on such products and services during the term of the MSA. The term of the MSA will continue through December 31, 2026, unless terminated sooner. The minimum commitment may increase to $300 million upon the occurrence of any of the following events: (i) at AstraZeneca's election on or before December 31, 2024, (ii) the date that AstraZeneca exercises the warrant issued pursuant to the terms thereof (as described below), or (iii) in the event of our initial public offering, if the average closing price of our common stock exceeds two times the offering price for any 30-day trading period following the one-year anniversary of such initial public offering.

Under the warrant, AstraZeneca has the right to purchase $100 million in shares of our Class A common stock at an exercise price equal to the price per share at which our common stock is valued in connection with the consummation of this initial public offering. The warrant may be exercised any time following the date that is 180 days following the pricing of our initial public offering. AstraZeneca will be entitled to substantially the same registration rights with respect to the shares under the warrant as those granted to holders of registrable securities pursuant to our Ninth Amended and Restated Investors' Rights Agreement, dated November 19, 2020. See "Description of Capital Stock — Warrant." The warrant will be automatically canceled and terminated for no consideration, if not previously exercised, in the event AstraZeneca declines to extend its financial commitment before December 31, 2024. If AstraZeneca exercises the warrant, AstraZeneca will be required to increase its minimum commitment under the MSA to $300 million. See "Business—Operations—Our Strategic Collaboration with AstraZeneca."

GlaxoSmithKline

In August 2022, we entered into a Master Services Agreement, or GSK MSA, with GlaxoSmithKline, or GSK. Under the MSA, we agreed, on a non-exclusive basis, to provide GSK with certain of our products and services, including licensed data, sequencing, clinical trial matching, organoid modeling services, algorithm development, and others. In exchange for certain discounted prices, GSK has committed to spend a minimum of $180 million on such products and services during the term of the GSK MSA, of which $70 million was paid upon execution. The term of the GSK MSA will continue through December 31, 2025, unless terminated sooner. An additional commitment of up to $120 million may be triggered at GSK's election for the years 2026 and 2027.

Acquisition of Highline Consulting, LLC

On January 4, 2022, we entered into a Unit Purchase Agreement with Highline, Highline Consulting Parent, LLC, and the unitholders of Highline, or collectively, the Sellers, pursuant to which we acquired all of the issued and outstanding equity interests in Highline, which transaction we refer to as the Highline Acquisition.

We acquired Highline for a purchase price of $35.5 million, subject to customary cash and net working capital adjustments. The contingent payments have been, and will be, recorded pro rata over the two years following the closing within selling, general and administrative expense. In addition, the Sellers are entitled to receive contingent consideration from us in an aggregate amount of up to $5.0 million, payable in a combination of cash and shares of our Class A common stock, contingent upon certain individual Sellers remaining employed by us as of the first and second anniversary of the closing. In addition, we established a retention bonus pool of RSUs with an aggregate value of $4.0 million to be allocated among Highline employees retained by us. The retention bonus pool will be recorded as compensation expense over the requisite service period.

Factors Affecting Our Performance

We believe there are several important factors that have impacted and that we expect will impact our operating performance and results of operations. While each of these areas presents significant opportunities for us, they also pose significant risks and challenges that we must address. See "Risk Factors" for more information.

Research and Development and New Products

We expect to maintain high levels of investment in product innovation over the coming years as we continue to develop new laboratory assays, develop algorithms, and expand our Platform into new disease areas. These investments will include laboratory costs incurred in validating new or improving current assays, licensing of data sets to accelerate our efforts in new diseases, and development and validation costs for new Algos products. We invested $61.2 million and $83.2 million during the years ended December 31, 2021 and 2022, respectively, and $61.6 million and $66.3 million during the nine months ended September 30, 2022 and 2023, respectively, in research and development. Our ability to develop new products, obtain regulatory approvals when required, launch them into the market, and drive adoption of these products by our customers will continue to play a key role in our results.

Customer Acquisition and Expansion

To grow our business requires both identifying new customers and expanding our partnerships with existing ones across each of our product lines. For Genomics, this entails our field salesforce developing relationships with individual physicians and hospital systems, demonstrating the power our Platform has in enabling them to provide personalized care to their patients. For Data, this entails our pharmaceutical business development teams demonstrating the power our Platform and database have in enabling drug discovery, development and clinical trial matching for our pharmaceutical partners. For AI Applications, this entails demonstrating the utility of these algorithms in a clinical setting. Since our inception, our offerings have been used by more than 6,500 physicians and we have worked with over 100 biotech companies, as well as 19 of the 20 largest public pharmaceutical companies

based on 2022 revenue, albeit with many we are still at an early stage of adoption. Our financial performance relies heavily on our ability to add customers to our Platform and expand the relationships with our current customers through adoption of our new products.

Investments in Technology

Technology is at the core of everything we do. From receiving orders and ingesting data through our various provider integrations to delivering test results and access to our analytical platform, our Platform plays a key role in driving our business. We will continue to make significant investments in our Platform to continually improve our user experience and allow us to generate, ingest and structure data more efficiently as we expand our offerings. We invested $67.2 million and $79.1 million during the years ended December 31, 2021 and 2022, respectively, and $58.3 million and $70.5 million during the nine months ended September 30, 2022 and 2023, respectively, in technology. We expect to maintain high levels of investment in our technology over the coming years as we continue to develop new features to support our current and future business needs. Our ability to execute on the development of such technology will continue to play a key factor in our results.

Payer Coverage and Reimbursement

Our financial performance relies heavily on our ability to secure reimbursement from payers and government health benefits programs. A substantial majority of the genomic testing we perform is clinical in nature. We typically receive reimbursement for these tests from commercial payers and from government health benefits programs, such as Medicare and Medicaid. The amount of payment we receive varies widely and depends on a variety of factors, including the payer, the assay run, and other characteristics about the patient. We received payment on approximately 50% of our clinical oncology NGS tests across all payors performed from January 1, 2021 through December 31, 2022. For the years ended December 31, 2021 and 2022, our average reimbursement for NGS tests billed to insurance in oncology was approximately $1,100 and $1,500, respectively. We will continue to invest significantly in various efforts aimed at improving our average reimbursement, including performing clinical studies to generate evidence of clinical utility, seeking regulatory approval for our tests, and opening additional lab locations. Any changes to medical policies impacting how our tests are reimbursed could have a significant impact on our results.

COVID-19 Global Pandemic

The global outbreak of the novel coronavirus in December 2019, or COVID-19, negatively affected our business in 2020 as testing was delayed due to patients delaying visits and our pharmaceutical partners delaying some of their drug development efforts due to office interruptions or paused clinical trial recruitment. In July 2020, we launched our iD test (COVID-19 PCR test) and received the FDA's emergency use authorization for use in the detection of the COVID-19 and thereafter obtained additional emergency use authorizations for other similar tests, ran some COVID-19 testing as LDTs, and also licensed and used the Saliva Direct assay to perform other COVID-19 testing. This testing generated $94.7 million and $22.2 million of revenue for the years ended December 31, 2021 and 2022, respectively, and $17.5 million of revenue for the nine months ended September 30, 2022. Demand for, and revenue from, our COVID-19 testing products decreased in 2022 due to the lower prevalence of COVID-19 from successful containment efforts and increased vaccination rates of a substantial majority of Americans, reduced testing needs of many of our clients, and the entrance of other testing providers in the market. Revenue from COVID-19 for the nine months ended September 30, 2023 was $2.7 million, as we stopped offering COVID-19 PCR diagnostic tests in the first quarter of 2023, at which time we shifted resources from COVID-19 testing to other aspects of the business.

Components of Results of Operations

Revenue

We currently primarily derive our revenue from two product lines: (1) Genomics and (2) Data and services.

Genomics

Genomics primarily includes revenue from diagnostics, PCR profiling, and other anatomic and molecular pathology testing to healthcare providers, pharmaceutical companies, biotechnology companies, researchers, and other third parties.

Data and Services

Data and services primarily includes revenue from de-identified data generated through our Genomics product line to our pharmaceutical and biotechnology partners for use in their drug development efforts. These transactions consist of data licensing agreements, AI-enabled clinical trial matching, and analytical services. Our Data revenue is typically back-weighted towards the second half of the year based on the budgeting cycles of our customers. We currently report our AI Applications revenue within this line item as it is immaterial.

Cost and Operating Expenses

We incur costs to generate revenue for each of our two primary product lines. Cost of revenues for our Genomics product line is a higher percentage of the Genomics revenue than cost of revenues for Data and services is as a percentage of Data and services revenue. As revenue shifts between these product lines, total cost of revenue as a percentage of revenue will be impacted. Our total cost of revenues will also increase in the quarter in which this offering occurs due to stock-based compensation expenses of approximately million related to RSUs and PSUs for which the service-based vesting condition was satisfied and for which the performance-based vesting condition will be satisfied in connection with this offering.

Cost of Revenues, Genomics

Cost of revenues for Genomics primarily includes personnel lab expenses, including salaries, bonuses, employee benefits and stock-based compensation expenses (which we refer to as "personnel costs"), and amortization of intangible assets, cost of laboratory supplies and consumables, laboratory rent expense, third-party administration fees associated with COVID-19 testing, depreciation of laboratory equipment and shipping costs. Costs associated with performing our tests are recorded as the tests are processed at the time of report delivery. We expect these costs will increase in absolute dollars as our Genomics revenue continues to grow.

Cost of Revenues, Data and Services

Cost of revenues for Data and services primarily includes data acquisition and royalty fees, and personnel costs related to delivery of our data services and platform, cloud costs, and certain allocated overhead expenses. Costs associated with performing data product services are recorded as incurred. We expect these costs will increase in absolute dollars as our Data and services revenues continue to grow. We currently report our AI Applications cost of revenue within this line item as it is immaterial.

Research and Development

Research and development expense primarily includes costs incurred to develop new assays and products, including validation costs, research and development and allocated lab personnel costs, salaries and benefits of the company's scientific and laboratory research and development teams, amortization of intangible assets, inventory costs, overhead costs, contract services and other related costs. Research and development costs are expensed as incurred. We plan to continue to invest in new assay development and expansion into new disease areas. As a result, we expect that research and development expenses will increase in absolute dollars for the foreseeable future as we continue to invest to support these activities. Our research and development expense will increase in the quarter in which this offering occurs due to stock-based compensation expenses of approximately million related to RSUs and PSUs for which the service-based vesting condition was satisfied and for which the performance-based vesting condition will be satisfied in connection with this offering.

Technology Research and Development

Technology research and development expense primarily includes personnel costs incurred related to the research and development of our technology platform and applications and the research and development of new products that we hope to bring to the market. Technology research and development costs are expensed as incurred. We plan to continue to invest in technology personnel to support our Platform and new algorithm development. We expect that technology research and development expenses will increase in absolute dollars for the foreseeable future as we continue to invest to support these activities. Our technology research and development expense will increase in the quarter in which this offering occurs due to stock-based compensation expenses of approximately million related to RSUs and PSUs for which the service-based vesting condition was satisfied and for which the performance-based vesting condition will be satisfied in connection with this offering.

Selling, General and Administrative

Our selling, general and administrative expense primarily includes personnel costs for our sales, executive, accounting and finance, legal and human resources functions, commissions, and other general corporate expenses, including software and tools, professional services, real estate costs, and travel costs.

We expect that our selling, general and administrative expenses will continue to increase in absolute dollars after this offering, primarily due to increased headcount and costs associated with operating as a public company, including expenses related to legal, accounting, regulatory, maintaining compliance with exchange listing and requirements of the SEC, director and officer insurance premiums and investor relations. These expenses, though expected to increase in absolute dollars, are expected to decrease modestly as a percentage of revenue in the long term, though they may fluctuate as a percentage from period to period due to the timing and extent of these expenses. Our selling, general and administrative expense will increase in the quarter in which this offering occurs due to stock-based compensation expenses of approximately million related to RSUs and PSUs for which the service-based vesting condition was satisfied and for which the performance-based vesting condition will be satisfied in connection with this offering.

Interest Income

Interest income consists of interest earned on our cash and cash equivalents.

Interest Expense

Interest expense consists primarily of interest from our Amended Note and Term Loan Facility (each as defined in "Liquidity and Capital Resources" below), and finance leases. Interest expense related to our convertible debt will continue, but should decrease over time as the principal amount decreases.

Other Income (Expense), Net

Other income (expense), net consists of foreign currency exchange gains and losses, and any changes in fair value related to our warrant liability. The Company issued a warrant to its customer AstraZeneca in conjunction with the signing of the November 2021 MSA. The fair value of the warrant liability is measured each reporting period. Foreign currency exchange gains and losses relate to transactions and asset and liability balances denominated in currencies other than the U.S. dollar. We expect our foreign currency gains and losses to continue to fluctuate in the future due to changes in foreign currency exchange rates.

Provision for (Benefit from) Income Tax

Provision for (benefit from) income taxes consists of U.S. federal and state income taxes and income taxes in certain foreign jurisdictions in which we conduct business, as adjusted for non-deductible expenses, and changes in the valuation of our deferred tax assets and liabilities. We maintain a full valuation allowance on our U.S. federal and state deferred tax assets as we have concluded that it is more likely than not that the deferred tax assets will not be realized.

Earnings (Losses) from Equity Method Investments

Earnings (losses) from equity method investments consist of earnings from our joint venture entered during the third quarter of 2020.

Results of Operations

The following table sets forth the significant components of our results of operations for the periods presented.

	Year Ended December 31,		Nine Months Ended September 30,	
	2021	2022	2022	2023
			(unaudited)	
	(in thousands)			
Net revenue				
Genomics	$ 195,012	$ 197,984	$ 140,055	$ 270,797
Data and services	62,841	122,684	79,987	113,301
Total net revenue	$ 257,853	$ 320,668	$ 220,042	$ 384,098
Cost and operating expenses				
Cost of revenues, genomics	162,276	150,255	108,752	138,781
Cost of revenues, data and services	11,933	40,227	29,503	40,690
Technology research and development	67,190	79,093	58,258	70,485
Research and development	61,161	83,158	61,552	66,268
Selling, general and administrative	199,004	233,377	168,804	211,662
Total cost and operating expenses	501,564	586,110	426,869	527,886
Loss from operations	$ (243,711)	$ (265,442)	$ (206,827)	$ (143,788)
Interest income	623	3,032	889	5,864
Interest expense	(15,184)	(21,894)	(12,671)	(33,245)
Other (expense) income, net	(316)	(4,846)	(4,453)	7,909
Loss before provision for income taxes	$ (258,588)	$ (289,150)	$ (223,062)	$ (163,260)
Provision for income taxes	—	(66)	—	(74)
Losses from equity method investments	(604)	(595)	(464)	(301)
Net Loss	$ (259,192)	$ (289,811)	$ (223,526)	$ (163,635)

Comparison of the Nine Months Ended September 30, 2022 and 2023

Revenue

Total revenue was $220.0 million for the nine months ended September 30, 2022 compared to $384.1 million for the nine months ended September 30, 2023, an increase of $164.1 million, or 74.6%. Adjusted for the impact of COVID-19 PCR testing, revenue increased $178.8 million, or 88.3%, from $202.6 million for the nine months ended September 30, 2022, compared to $381.4 million for the nine months ended September 30, 2023. The increase in revenue is due to increased volume and reimbursement of clinical oncology tests performed in Genomics and increased data deliveries in our Data and Services product line.

Genomics

Genomics revenue increased $130.7 million, or 93.4%, from $140.1 million for the nine months ended September 30, 2022, compared to $270.8 million for the nine months ended September 30, 2023. Revenue from COVID-19 PCR testing decreased $14.7 million period over period, as we ceased offering such testing in the first quarter of 2023. This decrease was offset by a $145.5 million increase in Genomics revenue primarily due to

an increase in the number of NGS tests delivered in oncology, which increased from approximately 70,000 tests for the nine months ended September 30, 2022 to approximately 160,000 tests for the nine months ended September 30, 2023. Additionally, there was an increase in average revenue per NGS oncology test, which increased from approximately $1,450 per test for the nine months ended September 30, 2022 to approximately $1,550 per test for the nine months ended September 30, 2023. The increase in average revenue per test was driven by increased Medicare reimbursement rates. The increase in Genomics revenue was offset by an increase of $7.1 million in a revenue reserve recorded for risks of future reversal of consideration associated with certain government payors.

Data and Services

Data and services revenue increased $33.3 million, or 41.6%, from $80.0 million for the nine months ended September 30, 2022, compared to $113.3 million for the nine months ended September 30, 2023. This increase is driven primarily by approximately $21.5 million from increased demand for our Insights products and approximately $9.7 million from increased demand for our Trials products. Across all Data and services products, the increase in revenue in 2023 is primarily attributable to continued growth from within our existing customer base, as well as continued adoption of our services by new customers that did not purchase services in 2022.

Cost and Operating Expenses

Cost of Revenues

Cost of revenues was $138.3 million for the nine months ended September 30, 2022, compared to $179.5 million for the nine months ended September 30, 2023, an increase of $41.2 million, or 29.8%. Adjusted for the impact of COVID-19 PCR testing, cost of revenues increased $56.6 million, or 46.6%, from $121.5 million for the nine months ended September 30, 2022, compared to $178.0 million for the nine months ended September 30, 2023. This increase was primarily due to an increase of $19.0 million in personnel costs, $19.9 million of material and service costs, and $2.6 million in cloud expenses.

Cost of Revenues, Genomics

Cost of revenues, Genomics was $108.8 million for the nine months ended September 30, 2022, compared to $138.8 million or the nine months ended September 30, 2023, an increase of $30.0 million, or 27.6%. Cost of revenues, Genomics, adjusted for the impact of COVID-19 PCR testing, was $92.0 million for the nine months ended September 30, 2022, compared to $137.3 million for the nine months ended September 30, 2023, an increase of $45.4 million, or 49.3%. This increase was primarily due to an increase of $19.9 million in material and service costs and an $11.1 million increase in personnel costs.

Cost of Revenues, Data and Services

Cost of revenues, Data and services was $29.5 million for the nine months ended September 30, 2022 compared to $40.7 million for the nine months ended September 30, 2023, an increase of $11.2 million, or 37.9%. This increase was primarily due to an increase of $7.9 million in personnel costs and an increase of $1.2 million in cloud expenses.

Research and Development

Research and development expenses were $61.6 million for the nine months ended September 30, 2022 and $66.3 million for the nine months ended September 30, 2023, an increase of $4.7 million, or 7.7%. This increase was primarily due to a $6.6 million increase in personnel-related costs for employees in our research and development group, offset by a $2.1 million decrease in data license fees as the result of an amended data licensing agreement.

Technology research and development

Technology research and development expenses were $58.3 million for the nine months ended September 30, 2022 and $70.5 million for the nine months ended September 30, 2023, an increase of $12.2 million, or 21.0%. This increase was primarily due to an increase in personnel-related costs associated with the investment in our cloud infrastructure and new lines of business.

Selling, General and Administrative

Selling, general and administrative expenses were $168.8 million for the nine months ended September 30, 2022 and $211.7 million for the nine months ended September 30, 2023, an increase of $42.9 million, or 25.4%. This increase was primarily due to an increase of $16.0 million in personnel-related costs, $9.7 million in software and tools costs, $6.3 million in cloud storage cost, and $3.5 million due to change in fair value of contingent consideration.

Interest Income

Interest income was $0.9 million for the nine months ended September 30, 2022 compared to $5.9 million for the nine months ended September 30, 2023, an increase of $5.0 million, or 559.5%. This increase was primarily due to the interest rate increases by the U.S. Federal Reserve.

Interest Expense

Interest expense was $12.7 million for the nine months ended September 30, 2022, compared to $33.2 million for the nine months ended September 30, 2023, an increase of $20.6 million, or 162.4%. This increase was primarily driven by compounding interest on our Amended Note and the commencement of interest on the Term Loan Facility in September 2022.

Other (Expense) Income, net

Other (expense) income, net was ($4.5) million for the nine months ended September 30, 2022, compared to other (expense) income, net of $7.9 million for the nine months ended September 30, 2023, an increase in income of $12.4 million, or 277.6%. This increase was primarily driven by fair value adjustments related to our warrant liability.

Earnings (Losses) from Equity Method Investments

For the nine months ended September 30, 2022, losses from equity method investments decreased by an immaterial amount compared to the nine months ended September 30, 2023.

Comparison of the Years Ended December 31, 2021 and 2022

Revenue

Total revenue was $257.9 million for the year ended December 31, 2021 compared to $320.7 million for the year ended December 31, 2022, an increase of $62.8 million, or 24.4%. Adjusted for the impact of COVID-19 PCR testing, revenue increased $135.4 million, or 83.0%, from $163.1 million for the year ended December 31, 2021, compared to $298.5 million for the year ended December 31, 2022. The increase in revenue is due to increased volume and reimbursement of clinical oncology tests performed in Genomics and increased data deliveries in our Data and Services product line.

Genomics

Genomics revenue increased $3.0 million, or 1.5%, from $195.0 million for the year ended December 31, 2021, compared to $198.0 million for the year ended December 31, 2022. Revenue from COVID-19 PCR testing

decreased $72.6 million. This decrease was offset by a $75.5 million increase in Genomics revenue primarily due to an increase in the number of NGS tests delivered in oncology, which increased from approximately 69,200 tests for the year ended December 31, 2021 to approximately 100,100 tests in the year ended December 31, 2022. Additionally, there was an increase in average revenue per NGS oncology test, which increased from approximately $1,100 per test for the year ended December 31, 2021 to approximately $1,500 per test for the year ended December 31, 2022. The increase in average revenue per test was driven by increased Medicare reimbursement rates. The increase in Genomics revenue was offset by a $5.2 million revenue reserve recorded for risks of future reversal of consideration associated with certain government payors.

Data and Services

Data and services increased $59.8 million, or 95.2%, from $62.8 million for the year ended December 31, 2021, compared to $122.7 million for the year ended December 31, 2022. This increase is driven primarily by $19.8 million in clinical trial services revenue from the acquisition of Highline, and approximately $34.1 million from increased demand for our Insights products. Across all Data and services products, the increase in revenue in 2022 is primarily attributable to continued growth from within our existing customer base, as well continued adoption of our services by new customers that did not purchase services in 2021.

Cost and Operating Expenses

Cost of Revenues

Cost of revenues was $174.2 million for the year ended December 31, 2021 compared to $190.5 million for the year ended December 31, 2022, an increase of $16.3 million, or 9.3%. Adjusted for the impact of COVID-19 PCR testing, cost of revenue increased $62.9 million, or 58.0%, from $108.5 million for the year ended December 31, 2021, compared to $171.5 million for the year ended December 31, 2022. This increase was primarily due to an increase of $25.0 million in personnel costs, $22.4 million of material and service costs, and $3.4 million in cloud expenses.

Cost of Revenues, Genomics

Cost of revenues, Genomics was $162.3 million for the year ended December 31, 2021, compared to $150.3 million for the year ended December 31, 2022, a decrease of $12.0 million, or 7.4%. The decrease was primarily due to a $46.7 million decrease in Cost of revenues, Genomics associated with COVID-19 PCR testing, as a result of efficiencies gained from streamlining our testing process since its inception in the third quarter of 2020. This decrease was partially offset by a $19.7 million increase in material and service costs and a $6.2 million increase in personnel costs.

Cost of Revenues, Data and Services

Cost of revenues, Data and services was $11.9 million for the year ended December 31, 2021 compared to $40.2 million for the year ended December 31, 2022, an increase of $28.3 million, or 237.1%. This increase was primarily due to an increase of $18.8 million in personnel costs and an increase of $3.4 million in cloud expenses.

Research and Development

Research and development expenses were $61.2 million for the year ended December 31, 2021 compared to $83.2 million for the year ended December 31, 2022, an increase of $22.0 million, or 36.0%. This increase was primarily due to a $12.6 million increase in personnel-related costs for employees in our research and development group and a $4.6 million increase in cloud expenses related to research and development, as we increased our spend and headcount to support continued investment in our technology.

Technology Research and Development

Technology research and development expenses were $67.2 million for the year ended December 31, 2021 compared to $79.1 million for the year ended December 31, 2022, an increase of $11.9 million, or 17.7%. This increase was primarily due to an increase in personnel-related costs associated with the investment in our cloud infrastructure and new lines of business.

Selling, General and Administrative

Selling, general and administrative expenses were $199.0 million for the year ended December 31, 2021 compared to $233.4 million for the year ended December 31, 2022, an increase of $34.4 million, or 17.3%. This increase was primarily due to an increase of $30.3 million in personnel-related costs.

Interest Income

Interest income was $0.6 million for the year ended December 31, 2021 compared to $3.0 million for the year ended December 31, 2022, an increase of $2.4 million, or 386.7%. This increase was primarily due to the interest rate increases by the U.S. Federal Reserve.

Interest Expense

Interest expense was $15.2 million for the year ended December 31, 2021 compared to $21.9 million for the year ended December 31, 2022, an increase of $6.7 million, or 44.2%. This increase was primarily driven by compounding interest on our Amended Note and the commencement of interest on the Term Loan Facility in September 2022.

Other Expense, Net

For the year ended December 31, 2021, other expense was $0.3 million compared to other expense of $4.8 million for the year ended December 31, 2022, an increase of $4.5 million, or 1433.5%. This increase was primarily driven by fair value adjustments related to our warrant liability.

Earnings (Losses) from Equity Method Investments

We entered into a joint venture in September 2020, which had a loss of $0.6 million for the years ended December 31, 2021 and 2022. Losses from equity method investments consist of earnings from our joint venture into which we entered during the third quarter of 2020.

Quarterly Results of Operations

The following table sets forth our unaudited quarterly consolidated statement of operations data for each of the eight quarters in the period ended September 30, 2023. The information for each of these quarters has been prepared in accordance with GAAP in the United States of America and on the same basis as our audited consolidated financial statements included elsewhere in this prospectus and, in the opinion of management, reflects all adjustments, which include only normal recurring adjustments, necessary for the fair presentation of our results of operations. This data should be read in conjunction with our audited financial statements and related notes included elsewhere in this prospectus. These quarterly operating results are not necessarily indicative of our operating results for the full year or any future period.

	Three Months Ended							
	December 31, 2021	March 31, 2022	June 30, 2022*	September 30, 2022*	December 31, 2022	March 31, 2023	June 30, 2023	September 30, 2023
	(in thousands)							
Net revenue								
Genomics[1]	$ 40,498	$ 37,902	$47,421	$ 54,732	$ 57,929	$ 82,058	$ 91,924	$ 96,815
Data and services	32,812	22,850	26,297	30,840	42,697	33,566	40,493	39,242
Total net revenue	$ 73,310	$ 60,752	$73,718	$ 85,572	$ 100,626	$115,624	$132,417	$ 136,057

	Three Months Ended							
	December 31, 2021	March 31, 2022	June 30, 2022*	September 30, 2022*	December 31, 2022	March 31, 2023	June 30, 2023	September 30, 2023
	(in thousands)							
Cost and operating expenses								
Cost of revenues, genomics[1]	32,993	39,084	34,266	35,402	41,503	45,280	46,961	46,540
Cost of revenues, data and services	3,985	7,788	10,613	11,102	10,724	11,393	13,807	15,490
Loss from operations	$ (54,796)	$(77,092)	$(66,557)	$ (63,178)	$ (58,615)	$(53,861)	$(45,138)	$ (44,789)
Net loss	$ (58,981)	$(81,290)	$(73,691)	$ (68,545)	$ (66,285)	$(54,377)	$(55,832)	$ (53,426)
[1]Revenue and cost of revenue from COVID-19 testing								
Genomics	9,783	8,982	3,618	4,891	4,674	2,638	73	—
Cost of revenue, genomics	5,329	10,009	3,962	2,813	2,169	1,352	54	—

* Based on a change in estimate, $3.1 million of Genomics revenue reflected in the three months ended September 30, 2022 was reclassified to the three months ended June 30, 2022.

Quarterly Revenue Trends

Revenue from COVID-19 testing has impacted the Genomics revenue line as illustrated in the table above.

Beginning in the second quarter of 2022, we experienced a significant uptick in reimbursement rates from Medicare, which contributed to increased Genomics revenue relative to Cost of revenue, Genomics during the second half of the year.

Beginning January 1, 2023, a new CPT code went into effect covering full transcriptome testing when performed separately from DNA testing. Historically, our xT assay was actually comprised of two separate and distinct procedures, DNA and RNA. Given there was not an applicable CPT code for RNA, we did not bill that test. With the introduction of the new code, we now have two separate assays, one analyzing DNA – xT and one analyzing RNA – xR that are ordered and billed for separately, which has increased Genomics revenue relative to Cost of revenue, Genomics in 2023.

Our Data and services revenue has historically experienced fluctuations due to seasonality driven by the procurement and budgeting cycles of many of our customers. As a result, the majority of data deliveries in 2021 occurred in the fourth quarter. Beginning in 2022, our Data and services revenue has been recognized more evenly throughout the year, largely as the result of signing strategic collaborations which contain more over time revenue recognition.

Quarterly Costs and Operating Expense Trends

Costs associated with COVID-19 testing has impacted the Cost of revenues, genomics line as illustrated in the table above.

Cost of revenues, data and services has decreased relative to the increase in Data and services revenue due to continued growth of Insights products, which have a higher margin of approximately 75%, compared to Trials products, which have a margin of approximately 40%.

Liquidity and Capital Resources

We have incurred significant losses and negative cash flows from operations since our inception, and as of September 30, 2023, we had an accumulated deficit of $1.3 billion.

We expect to incur additional operating losses in the near future and our operating expenses will increase as we continue to invest in clinical trials and develop new offerings, expand our sales organization, and increase our marketing efforts to drive market adoption of our tests. As demand for our tests continues to increase from physicians and biopharmaceutical companies, we anticipate that our capital expenditure requirements could also increase if we require additional laboratory capacity.

We have funded our operations to date principally from the sale of stock, convertible debt, term debt, and sales of our products. As of September 30, 2023, we had cash, cash equivalents and restricted cash of $133.4 million. On January 4, 2022, we funded through cash on hand, the $35.5 million acquisition of Highline Consulting, LLC (which purchase price was subject to customary cash and net working capital adjustments). From April 18 to April 22, 2022, we sold an aggregate of 1,614,114 shares of our Series G-3 convertible preferred stock at a price per share of $57.3069 for an aggregate purchase price of approximately $92.5 million in private placements to accredited investors. In August 2022, the Company entered into the GSK MSA, under which GSK has committed to spend a minimum of $180 million, of which $70 million was paid upon execution. In October 2023, we sold an aggregate of 785,245 shares of our Series G-4 preferred stock at a price per share of $57.3069, for an aggregate purchase price of approximately $45.0 million in a private placement to accredited investors.

Based on our current business plan, we believe our current cash and cash equivalents and anticipated cash flows from operations, inclusive of the Series G-4 Financing undertaken and the additional term debt received in October 2023, will be sufficient to meet our anticipated cash requirements for more than twelve months from the date of this prospectus. We plan to raise additional capital to expand our business, to pursue strategic investments, to take advantage of financing opportunities or for other reasons. As we grow our revenue, our accounts receivable and inventory balances will increase. Any increase in accounts receivable and inventory may not be completely offset by increases in accounts payable and accrued expenses, which could result in greater working capital requirements.

If our available cash and cash equivalents and anticipated cash flows from operations are insufficient to satisfy our liquidity requirements including because of lower demand for our products as a result of lower than currently expected rates of reimbursement from our customers or other risks described elsewhere in this prospectus, we will seek to sell additional common or preferred equity or convertible debt securities, enter into a credit facility or another form of third-party funding or seek other debt financing. The sale of equity and convertible debt securities, or exercise of warrants may result in dilution to our stockholders and, in the case of preferred equity securities or convertible debt, those securities could provide for rights, preferences or privileges senior to those of our common stock. The terms of debt securities issued or borrowings pursuant to a credit agreement could impose significant restrictions on our operations. If we raise funds through collaborations and licensing arrangements, we might be required to relinquish significant rights to our platform technologies or products or grant licenses on terms that are not favorable to us. Additional capital may not be available to us on reasonable terms, or at all. The failure to obtain any required future financing may require us to reduce or eliminate certain existing operations.

Series G-3 Financing

On April 18, 2022, we entered into a stock purchase agreement with certain of our existing investors, including Mr. Lefkofsky, pursuant to which we issued and sold 1,614,114 shares of our Series G-3 preferred stock at a price per share of $57.3069, for an aggregate purchase price of approximately $92.5 million, or the Series G-3 Financing. The terms of our Series G-3 preferred stock provide that in the event of an initial public offering of our common stock, occurring after June 30, 2023, each share of Series G-3 preferred stock would be converted into a number of shares of our Class A common stock equal to (i) $57.3069 per share, plus any accrued and unpaid dividends on such share divided by (ii) the lesser of (a) $51.5762 and (b) 85% of the public offering price in this offering. Based on an assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, all of the shares of Series G-3 preferred stock will convert into an aggregate of shares of our Class A common stock in connection with

this offering. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the number of shares of Class A common stock into which all shares of Series G-3 preferred stock would convert in connection with this offering by approximately shares. In addition, in connection with the Series G-3 Financing, we agreed to issue to a stockholder a contingent payment of up to $ million in shares of Class A common stock, assuming an initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, which payment may be made in cash or shares of Class A common stock, upon mutual agreement of us and the stockholder.

Series G-4 Financing

On October 11, 2023, we entered into a stock purchase agreement with certain investors, pursuant to which we issued and sold 785,245 shares of our Series G-4 preferred stock at a price per share of $57.3069, for an aggregate purchase price of approximately $45.0 million, or the Series G-4 Financing. As part of the Series G-4 Financing, we may sell up to an additional 2,704,736 shares of Series G-4 preferred stock through January 9, 2024. The terms of our Series G-4 preferred stock provide that in the event of an initial public offering of our Class A common stock, each share of Series G-4 preferred stock would be converted into a number of shares of our Class A common stock equal to (i) $57.3069 per share, plus any accrued and unpaid dividends on such share divided by (ii) the lesser of (a) $51.5762 and (b) 85% of the public offering price in this offering. Based on an assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, all of the shares of Series G-4 preferred stock will convert into an aggregate of shares of our Class A common stock in connection with this offering. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the number of shares of Class A common stock into which all shares of Series G-4 preferred stock would convert in connection with this offering by approximately shares.

In addition, we agreed to pay to each purchaser in the Series G-4 Financing an amount equal to 5% of the per share price for each share of Series G-4 preferred stock purchased by such purchaser, or the G-4 Special Payment, in the event that following this offering, the average of the last trading price on each trading day during the ten day trading period beginning on the first day of trading of our Class A common stock is less than 110% of the price per share of Class A common stock sold in this offering. If applicable, the G-4 Special Payment will be equal to approximately $2.3 million in the aggregate and will be payable in cash to the purchasers within 30 days following this offering.

Term Loan Facility

On September 22, 2022, we entered into a Credit Agreement with Ares Capital Corporation, or Ares, for a senior secured loan, or Term Loan Facility, in the amount of $175 million, less original issue discount of $4.4 million and deferred financing fees of $2.6 million. On April 25, 2023, we entered into an amendment to the Credit Agreement, which increased the aggregate principal amount of the Term Loan Facility by an additional $50 million, less original issue discount of $1.3 million, and increased the interest rate on the Term Loan Facility by 25 basis points. On October 11, 2023, we entered into a second amendment to the Credit Agreement, which increased the aggregate principal amount of the Term Loan Facility by an additional $35 million, less original issue discount of $0.9 million. Terms of the second amendment are consistent with those of the first amendment. Interest on the Term Loan Facility is payable as follows: (i) for any interest period for which we elect to pay interest in cash, the cash interest rate for Base Rate and Term SOFR borrowings will be the Base Rate plus 6.25% and Term SOFR plus 7.25%, respectively, and (ii) for any interest period for which we elect to pay interest in kind, the cash interest rate for Base Rate and Term SOFR borrowings will be the Base Rate plus 4% and Term SOFR plus 5%, respectively, and the paid-in-kind interest rate will be 3.25%. The proceeds of the Term Loan Facility will be used for working capital and general corporate purposes, including to finance growth initiatives and to pay for operating expenses. The Term Loan Facility is due at maturity on September 22, 2027

and is subject to quarterly interest payments. All obligations under the Term Loan Facility are guaranteed by us and secured by substantially all of our assets. We have the right at any time and from time to time to prepay any Term Loan Facility in whole or in part.

The Term Loan Facility contains customary representations and warranties, financial and other covenants, and events of default, including but not limited to, limitations on earnout, milestone, or deferred purchase obligations, dividends on preferred stock and stock repurchases, cash investments, and acquisitions. We are required to maintain a minimum liquidity of at least $25 million and maintain specified amounts of consolidated revenues for the trailing twelve-month period ending on the last day of each fiscal quarter. Minimum consolidated revenues increase each quarter. For the years ended December 31, 2023 and 2024, we are required to generate consolidated revenues of $342.7 million and $459.1 million, respectively. We were in compliance with the covenants of the Credit Agreement as of September 30, 2023.

Convertible Promissory Note

On June 22, 2020, in connection with our entry into an agreement for use of Google LLC's, or Google's, Google Cloud Platform, we issued Google a convertible promissory note, or the Note, in the original principal amount of $330.0 million. On November 19, 2020, in connection with our Series G-2 convertible preferred stock financing, we issued Google $80 million of our Series G-2 preferred stock, at a 10% discount to the purchase price per share in such financing, in partial satisfaction of the outstanding principal amount under the Note, and we amended and restated the terms of the Note.

The amended and restated Note, or the Amended Note, has a principal amount of $250.0 million, and bears interest at the rate set forth therein. The principal amount is automatically reduced each year based on a formula taking into account the aggregate value of the Google Cloud Platform services used by us. We account for the principal reductions as an offset to our cloud and compute spend within selling, general and administrative expense in our Consolidated Statements of Operations and Comprehensive Loss. The outstanding principal and accrued interest under the Amended Note, or the Outstanding Amount, is due and payable on the earlier of (1) March 22, 2026, which is the maturity date of the Amended Note, (2) upon the occurrence and during the continuance of an event of default, and (3) upon the occurrence of an acceleration event, which includes any termination by us of our Google Cloud Platform agreement. We generally may not prepay the Outstanding Amount, except that we may, at our option, prepay the Outstanding Amount in an amount such that the principal amount remaining outstanding after such repayment is $150.0 million.

If the Amended Note is outstanding at the maturity date, Google may, at its option, convert the then outstanding principal amount and interest accrued under the Amended Note into a number of shares of our Class A common stock equal to the quotient obtained by dividing (1) the Outstanding Amount on the maturity date, by (2) the average of the last trading price on each trading day during the twenty day period ending immediately prior to the maturity date.

Cash Flows

The following table summarizes our cash flows for the periods presented:

	Year Ended December 31,		Nine Months Ended September 30,	
	2021	2022	2022	2023
			(unaudited)	
	(in thousands)			
Net cash used in operating activities	$ (211,984)	$ (168,204)	$ (109,710)	$ (174,072)
Net cash used in investing activites	$ (21,724)	$ (57,939)	$ (52,013)	$ (34,768)
Net cash provided by (used in) financing activities	$ (2,039)	$ 251,391	$ 252,971	$ 38,661

Operating Activities

Cash used in operating activities during the nine months ended September 30, 2022 was $109.7 million, which resulted from a net loss of $223.5 million, offset by a net change in our operating assets and liabilities of $77.6 million and non-cash charges of $36.2 million. Non-cash charges primarily consisted of $21.8 million of depreciation and amortization, amortization of the warrant asset of $4.0 million, an increase in the fair value of the warrant liability of $4.2 million, and a decrease in the fair value of contingent consideration of $3.9 million. The net change in our operating assets and liabilities was primarily the result of a $65.7 million increase in deferred revenue.

Cash used in operating activities during the nine months ended September 30, 2023 was $174.1 million, which resulted from a net loss of $163.6 million and a net change in our operating assets and liabilities of $49.6 million, offset by non-cash charges of $39.2 million. Non-cash charges primarily consisted of $24.5 million of depreciation and amortization, $5.1 million of non-cash operating lease costs, $7.4 million due to impairment of intangible assets, amortization of the warrant asset of $5.0 million, and a decrease in the fair value of the warrant liability of $8.0 million. The net change in our operating assets and liabilities was primarily the result of a $25.4 million increase in accounts receivable and a $16.6 million decrease in deferred revenue.

Cash used in operating activities during the year ended December 31, 2021 was $212.0 million, which resulted from a net loss of $259.2 million and net change in our operating assets and liabilities of $14.6 million, offset by non-cash charges of $32.7 million. Non-cash charges primarily consisted of $23.9 million of depreciation and amortization and a $5.2 million change in fair value of contingent consideration. The net change in our operating assets and liabilities was primarily the result of a $14.6 million decrease in inventory as a result of reducing supplies for COVID-19 kit tests and the expiration of COVID-19 testing kits and oncology lab supplies. The remaining net change in our operating assets and liabilities is a result of a $9.5 million increase in deferred revenue primarily related to the volume and timing of our data contracts.

Cash used in operating activities during the year ended December 31, 2022 was $168.2 million, which resulted from a net loss of $289.8 million, offset by a net change in our operating assets and liabilities of $71.8 million and non-cash charges of $49.8 million. Non-cash charges primarily consisted of $30.0 million of depreciation and amortization, $6.4 million of non-cash operating lease costs, amortization of the warrant asset of $4.7 million, an increase in the fair value of the warrant liability of $4.7 million, and a decrease in the fair value of contingent consideration of $3.7 million. The net change in our operating assets and liabilities was primarily the result of a $67.6 million increase in deferred revenue.

Investing Activities

Cash used in investing activities during the nine months ended September 30, 2022 was $52.0 million, which resulted from $35.0 million related to the Highline Acquisition, and purchases of property and equipment of $16.5 million.

Cash used in investing activities during the nine months ended September 30, 2023 was $34.8 million, which was the result of purchases of property and equipment of $31.9 million, which related primarily to the expansion of the Chicago office for additional lab space.

Cash used in investing activities during the year ended December 31, 2021 was $21.7 million, which resulted from investments in non-marketable security of $6.0 million, the release of escrow related to the AKESOgen purchase of $4.0 million, and purchases of property and equipment of $11.8 million.

Cash used in investing activities during the year ended December 31, 2022 was $57.9 million, which resulted from $35.0 million related to the Highline Acquisition, and purchases of property and equipment of $18.4 million.

Financing Activities

Cash provided by financing activities during the nine months ended September 30, 2022 was $253.0 million, which was primarily due to net proceeds of $170.6 million from the Term Loan Facility with Ares and $92.2 million in net proceeds from the issuance of convertible preferred stock, offset by $5.6 million of dividend payments, $1.7 million in payments for deferred offering costs, and $2.3 million in payments for deferred financing fees.

Cash provided by financing activities during the nine months ended September 30, 2023 was $38.7 million, which was primarily due to net proceeds of $48.8 million from the Term Loan Facility with Ares, offset by $5.6 million of dividend payments, and $3.6 million in purchase of treasury stock.

Cash used in financing activities during the year ended December 31, 2021 was $2.0 million, which was primarily due to net proceeds of $8.9 million from the issuance of convertible preferred stock, offset by dividends of $5.6 million, payment of contingent consideration of $3.4 million, and payment of deferred offering costs of $1.1 million.

Cash provided by financing activities during the year ended December 31, 2022 was $251.4 million which was primarily due to net proceeds of $170.6 million from the Term Loan Facility with Ares and $92.2 million in net proceeds from the issuance of convertible preferred stock, offset by $5.6 million of dividend payments, $2.9 million in payments for deferred offering costs, and $2.6 million in payments for deferred financing fees.

Contractual Obligations and Commitments

Our contractual commitments will have an impact on our future liquidity. These commitments include future payments on non-cancellable leases, purchase obligations related to data licenses and cloud computing services, and future payments on our convertible promissory note. Where applicable, we calculate our obligation based on termination fees that can be paid to exit the contract. The data license agreements include committed payments for access to certain data and additional payments contingent on the commercialization of such data.

The following table summarizes our contractually committed future obligations as of December 31, 2022 and September 30, 2023 (in thousands):

December 31, 2022	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating lease obligations	54,277	8,760	16,785	13,408	15,324
Finance lease obligations	294	294	—	—	—
Purchase obligations	105,749	30,480	58,960	16,309	—
Term Loan Facility	175,000	—	—	175,000	—
Convertible Promissory Note*	260,579	—	—	260,579	—
Total	595,899	39,534	75,745	465,296	15,324

* Includes $39,485 of interest payable.

September 30, 2023	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating lease obligations	50,184	6,785	16,980	15,634	10,785
Purchase obligations	115,055	37,597	71,988	5,470	—
Term Loan Facility	227,122	—	—	227,122	—
Convertible Promissory Note*	250,083	—	250,083	—	—
Total	642,444	44,382	339,051	248,226	10,785

* Includes $51,209 of interest payable.

Off-Balance Sheet Arrangements

We did not have during the period presented, and we do not currently have, any off-balance sheet financing arrangements or any relationships with unconsolidated entities or financial partnerships, including entities sometimes referred to as structured finance or special purpose entities, that were established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Critical Accounting Policies and Estimates

We have prepared our consolidated financial statements in accordance with generally accepted accounting principles in the United States, or GAAP. Our preparation of these consolidated financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, expenses and related disclosures at the date of the consolidated financial statements, as well as revenue and expenses recorded during the reporting periods. We evaluate our estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could therefore differ materially from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in Note 2 to our audited consolidated financial statements included elsewhere in this prospectus, we believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our financial statements.

Revenue Recognition

We derive Genomics revenue from selling lab services to physicians, academic research institutions, and other parties. We also derive Data and services revenue from the commercialization of data generated in the lab through the licensing of de-identified datasets to third parties and from matching patients to clinical trials enrolled in its clinical trial network and related services. The majority of our revenue is generated in North America.

We account for our revenue in accordance with ASC Topic 606, *Revenue From Contracts With Customers*. We commence revenue recognition when control of these products is transferred to customers in an amount that reflects the consideration we expect to be entitled to in exchange for such products. This principle is achieved by applying the following five-step approach: (i) we account for a contract when it has approval and commitment from both parties, (ii) the rights of the parties are identified, (iii) payment terms are identified, (iv) the contract has commercial substance and (v) collectability of consideration is probable. Revenue and any contract assets are not recognized until such time that the required conditions are met.

Genomics

For direct bill orders billed to research institutions, pharmaceutical companies, or other third parties, we determine the transaction prices based on established contractual rates with the customer, net of any applicable discounts. Payment is typically due between 30 and 60 days following the date of invoice.

For clinical orders billed to Medicare, Medicaid, and commercial insurance, we determine the transaction price by reducing the standard charge by the estimated effects of any variable consideration, such as contractual allowance and implicit price concessions. We estimate contractual allowances and implicit price concessions based on historical collections in relation to established rates, as well as known current or anticipated reimbursement trends not reflected in the historical data. Estimates are inclusive of the consideration to which we will be entitled at an amount for which it is probable that a reversal of cumulative consideration will not occur. We monitor the estimated amount to be collected at each reporting period based on actual cash collections in order to assess whether a revision to the estimate is required. Payment is typically due after the claim has been

processed by the payor, generally 30-120 days from date of service. While management believes that the estimates are accurate, actual results could differ, and the potential impact on the financial statements could be significant.

Stock-Based Compensation

We recognize compensation expense for equity awards based on the grant-date fair value on a straight-line basis over the remaining requisite service period for the award. For those awards with a market condition, we utilize a Monte Carlo simulation model to estimate the fair value of the restricted stock units.

We issue restricted stock units to certain of our employees. The general terms of the restricted stock units require both a service and performance condition to be satisfied prior to vesting. The service condition is satisfied upon the participant's completion of a required period of continuous service from the vesting start date. The performance condition will be satisfied upon a liquidity event, which would result in recognition of stock-based compensation expense upon the consummation of this offering. For certain other units, a secondary performance condition exists to be vested, which will be satisfied upon achievement of a specific market condition, which could result in recognition of stock-based compensation expense upon the consummation of this offering.

Common Stock Valuations

Prior to this offering our common stock was not publicly traded. As such, we were required to estimate the fair value of our common stock. Our board of directors considered numerous objective and subjective factors to determine the fair value of our common stock as awards were approved, including utilizing third-party valuations to assist with the determination of the estimated fair-market value and common stock price. Given the absence of a public trading market for our common stock, the valuations of common stock were determined in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation, and our board of directors exercised reasonable judgment and considered numerous and subjective factors to determine the best estimate of fair value of our common stock, including the following factors:

- contemporaneous valuations performed by independent third-party specialists;
- the prices, rights, preferences and privileges of our redeemable convertible preferred stock relative to those of our common stock;
- the prices of common or preferred stock sold to third-party investors by us and in secondary transactions or repurchased by us in arms-length transactions;
- lack of marketability of our common stock;
- our actual operating and financial performance;
- current business conditions and projections;
- our stage of development;
- likelihood of achieving a liquidity event, such as an initial public offering or a merger or acquisition of our company given prevailing market conditions;
- the market performance of comparable publicly traded companies; and
- the U.S. and global capital market conditions.

In valuing our common stock, management determined the equity value of our business using various valuation methods including combinations of income and market approaches. The income approach estimates value based on the expectation of future cash flows that a company will generate. These future cash flows were discounted to their present values using a discount rate derived from an analysis of the cost of capital of comparable publicly traded companies in our industry or similar business operations as of each valuation date and adjusted to reflect the risks inherent in our cash flows.

For each valuation, the equity value determined by the income and market approaches was then allocated to the common stock. We performed this allocation using the option pricing method, or OPM, which treats the securities comprising our capital structure as call options with exercise prices based on the liquidation preferences of our various series of preferred stock and the exercise prices of our options and warrants. Following the formal approval by our board of directors of a plan for our company to pursue an initial public offering, from the second quarter of 2021 through the first quarter of 2022, we used a probability-weighted expected return method, or PWERM, which involves the estimation of multiple future potential outcomes, and estimates of the probability of each potential outcome. From the second quarter of 2022 through the second quarter of 2023, in response to volatile market conditions and the resulting uncertainty around the timing of a liquidity event, we changed our valuation methodology back to an OPM. Beginning in the third quarter of 2023, as a result of improving market conditions, we switched back to a PWERM. The per share value of our common stock is ultimately based upon probability-weighted per share values resulting from the various future scenarios, which include an initial public offering, merger or sale or continued operation as a private company.

Application of these approaches involves the use of estimates, judgments and assumptions that are highly complex and subjective, such as those regarding our expected future revenue, expenses, and future cash flows, discount rates, market multiples, the selection of comparable companies, and the probability of possible future events. Changes in any or all of these estimates and assumptions or the relationships between those assumptions affect our valuations as of each valuation date and may have a material impact on the valuation of our common stock.

For valuations after the completion of this offering, management will determine the fair value of each share of underlying common stock based on the closing price of our common stock as reported on the date of grant. Future expense amounts for any particular period could be affected by changes in our assumptions or market conditions.

In connection with this offering, we expect to incur approximately $ million of stock-based compensation expense related to RSUs and PSUs granted through September 30, 2023, for which the service-based vesting condition was satisfied and for which the performance-based vesting condition will be satisfied in connection with this offering. In addition, based on RSUs and PSUs outstanding as of , 2023, we expect to recognize approximately $ million of additional stock-based compensation expense related to these awards during the next twelve months.

Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in interest rates and foreign currency exchange rates.

Interest Rate Risk

We are exposed to market risk for changes in interest rates related primarily to our cash, cash equivalents and restricted cash, and our indebtedness. As of September 30, 2023, we had cash, cash equivalents and restricted cash of $133.5 million held primarily in cash deposits and money market funds.

Foreign Currency Risk

The majority of our revenue is generated in the United States. Through September 30, 2023, we have generated an insignificant amount of revenues denominated in foreign currencies. As we expand our presence in the international market, our results of operations and cash flows are expected to increasingly be subject to fluctuations due to changes in foreign currency exchange rates and may be adversely affected in the future due to these related changes. As of September 30, 2023 the effect of a hypothetical 10% change in foreign currency exchange rates would not be material to our financial condition or results of operations. To date, we have not entered into any hedging arrangements with respect to foreign currency risk. As our international operations grow, we will continue to reassess our approach to manage our risk relating to fluctuations in currency rates.

Inflation Risk

We are also exposed to inflation risk and inflationary factors, such as increases in raw material and overhead costs, which could impair our operating results. Although we do not believe that inflation has had a material impact on our financial position or results of operations to date, a high rate of inflation in the future may have an adverse effect on our ability to maintain current levels of gross margin and operating expenses as a percentage of revenue.

JOBS Act Accounting Election

We are an "emerging growth company" as defined in the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to use this exemption from new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that have not made this election.

Recent Accounting Pronouncements

See the section titled "Summary of Significant Accounting Policies" in Note 2 to our audited consolidated financial statements included elsewhere in this prospectus for more information.

BUSINESS

Business Overview

We endeavor to unlock the true power of precision medicine by creating Intelligent Diagnostics through the practical application of artificial intelligence, or AI, in healthcare. Intelligent Diagnostics use AI, including generative AI, to make laboratory tests more accurate, tailored, and personal. We make tests intelligent by connecting laboratory results to a patient's own clinical data, thereby personalizing the results. Our novel insight was realizing that all laboratory test results, genomic or otherwise, could be contextualized for a specific patient based upon that patient's unique characteristics, and technology could therefore guide therapy selection and treatment decisions to allow each patient to progress on their own unique path. The drugs recommended, the clinical trials explored, the care pathways evaluated, the adverse events considered—all have the potential to be refined and enhanced when test results are connected to a patient's personal profile, enabling the right patient to be routed to the right therapy at the right time.

To accomplish this, we built the Tempus Platform, which comprises both a technology platform to free healthcare data from silos and an operating system to make the resulting data useful. Our proprietary technology has allowed us to amass what we consider to be one of the largest libraries of clinical and molecular oncology data in the world. Our goal is to embed AI, including generative AI, throughout every aspect of diagnostics to enable physicians and researchers to make personalized, data-driven decisions that improve patient care.

The ability to deploy AI in precision medicine at scale has only recently become possible. Advances in cloud computing, imaging technologies, large language models and low-cost molecular profiling, along with the digitization of vast amounts of healthcare data, have created a landscape that we believe is finally ripe for AI. However, despite an increase in the availability of healthcare data, physicians and researchers are largely unable today to leverage this data to improve patient care. The vast majority of healthcare data remains disconnected and lacks harmonization and structure. Traditional diagnostic tests are typically based only on a single data modality, such as a blood- based biomarker or a genomic mutation, and do not connect and integrate other forms of relevant clinical data, such as outcomes, or adverse events, or pathology results, which are essential for many clinical decisions.

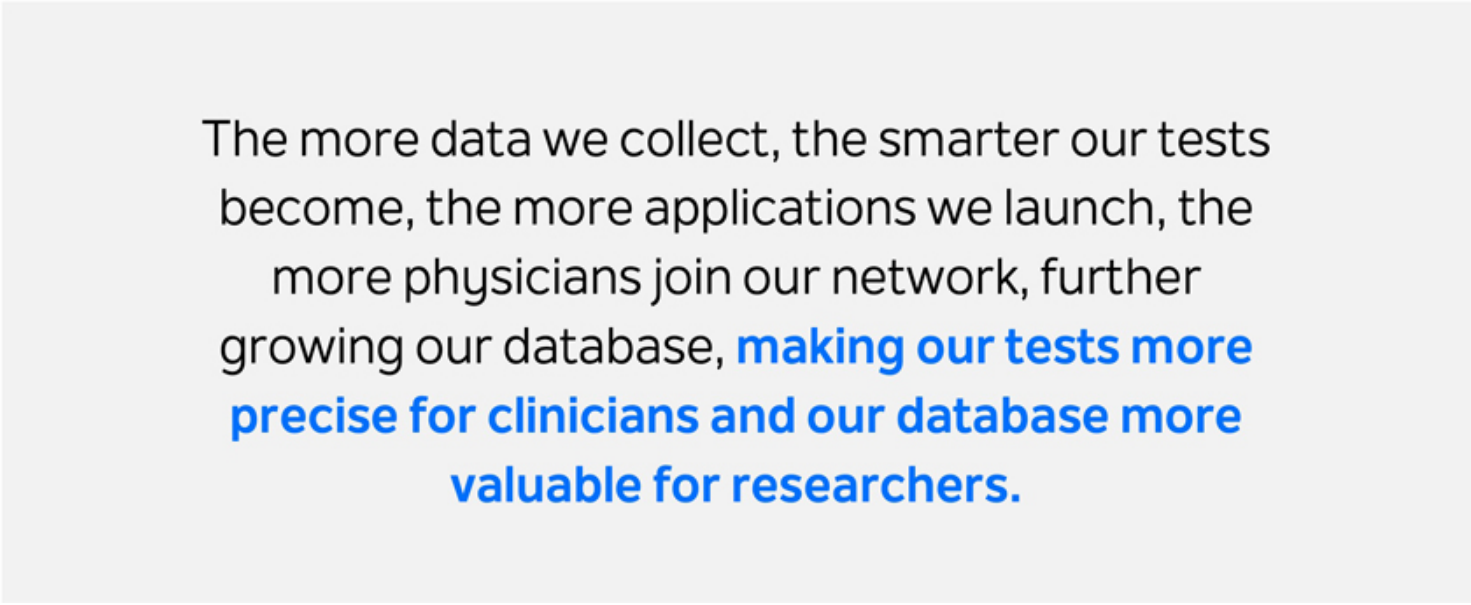
In order to bring AI to healthcare at scale, we began by rebuilding the foundation of how data flows in and out of healthcare institutions. We established data pipes, going to and from providers, to allow for the free exchange of data between physicians, who interpret data, and diagnostic and life science companies, who provide data. Without this capability, we believe that data could continue to accumulate without impacting patient care. Tempus has built this integrated Platform, and we are now deploying it at scale in the United States in oncology, and other areas, including neuropsychology, radiology, and cardiology, with aspirations to eventually be in all major disease areas globally. Our Platform connects multiple stakeholders within the larger healthcare ecosystem, often in near real time, to assemble and integrate the data we collect, thereby providing an opportunity for physicians to make data-driven decisions in the clinic and for researchers to discover and develop therapeutics.

Tempus is a technology company focused on healthcare that straddles two converging worlds. We strive to combine deep healthcare expertise, providing next-generation diagnostics across multiple disease areas, with leading technology capabilities, harnessing the power of data and analytics to help personalize medicine. Unlike traditional diagnostic labs, we can incorporate unique patient information, such as clinical, molecular, and imaging data, with the goal of making our tests more intelligent and our results more insightful. Unlike technology companies, we are deeply rooted in clinical care delivery as one of the largest sequencers of patients in the United States. Straddling both worlds is advantageous as we believe Intelligent Diagnostics represent the future of precision medicine, informing more personalized and data-driven therapy selection and development.

Our Platform includes proprietary software and dedicated data pipelines that create a network of healthcare institutions through more than 500 unique data connections, many of which supply us with complex multimodal data in near real time, across approximately 2,000 healthcare institutions that order our products and services. Healthcare institutions supply us with this data in our capacity as a covered entity (for example, when we provide

Next Generation Sequencing, or NGS, services on behalf of a patient), or as a business associate (for example, when we provide clinical trial matching services or data de-identification and structuring services). In addition to the data we receive in these capacities, we currently have a limited number of paid license agreements through which we acquire de-identified data directly from healthcare associations or institutions, and in certain circumstances we cover the actual direct costs associated with the technical integrations needed to create a data connection. We then integrate this data into a unified multimodal database through which we offer numerous analytical and decision support capabilities to our customers. We establish dedicated and integrated data connections with healthcare institutions to enhance the information we provide in our clinical reports, to increase the effectiveness of our clinical trial matching services, and to enable our AI Applications product line, which we believe has the ability to transform healthcare.

We have developed multiple products—each based on our Platform—that have allowed us to invest in structuring and harmonizing multimodal data, which is a necessary precursor for deploying AI at scale. Our products are organized under three product lines, *Genomics*, *Data*, and *AI Applications or Algos.* Each product line is designed to enable and enhance the others, thereby creating network effects in each of the markets in which we operate. Our business model allows pharmaceutical and biotechnology companies to unlock value from the data we collect, and allows us to monetize a de-identified copy of that data, in different ways across our different product lines. We believe these network effects provide a unique advantage to our business as the compounding value of each data record in our database serves to enhance our competitive moat. The more data we collect, the smarter our tests become, the more applications we launch, the more physicians join our network, further growing our database, making our tests more precise for clinicians and our database more valuable for researchers.



Our *Genomics* product line leverages our laboratories to provide NGS diagnostics, PCR profiling, and other anatomic and molecular pathology testing to healthcare providers, life sciences companies, researchers, and other third parties. However, unlike other laboratory diagnostic testing providers, many of our tests are connected to clinical data in some manner, which allows our suite of tests to be self-learning and become more accurate with each new test that we run. Our *Data and Services* product line facilitates drug discovery and development for life sciences companies through two primary products, Insights and Trials. Through our Insights product, we license de-identified libraries of linked clinical, molecular, and imaging data and provide a suite of analytic and cloud-and-compute tools to pharmaceutical and biotechnology companies. Our second product within our Data and Services product line, *Trials*, leverages our broad network of oncologists to provide clinical trial matching services for pharmaceutical companies that are looking to reach hard-to-find and underserved patient populations. Our third product line, *AI Applications,* is focused on developing and providing diagnostics that are algorithmic in nature, implementing new software as a medical device, and building and deploying clinical decision support tools. The primary product of AI Applications is currently "Next," an AI platform that leverages machine learning to apply an "intelligent layer" onto routinely generated data to proactively identify and minimize care gaps for oncology and cardiology patients. As this product gains adoption, we intend to leverage

large language models, generative AI algorithms, and our vast database of de-identified data to develop algorithmic diagnostics designed to identify these patients earlier in their disease progression, when treatments are most effective.

Industry Background

The Limitations of Employing Technology, Data, and AI in Healthcare and Precision Medicine

Technology has had a significant impact on almost every sector of our global economy. From the way we shop online, access information on the internet, or use GPS to navigate the world. We benefit from, and depend on, technology, data, and the vast computational and connective ecosystem that surrounds us. Yet healthcare has seemingly lagged other industries in embracing the power of technology and leveraging the ensuing computational revolution.

We believe this is changing. Recent technological advancements have facilitated the deployment of modern computational methods, such as AI and machine learning, to improve healthcare. Breakthroughs in cloud computing, imaging technologies, large language models, and low-cost molecular profiling have made it easier and more cost effective to digitize, structure, harmonize, and store healthcare data, and analyze the resulting datasets at an unprecedented rate. These developments are expediting the adoption of AI, which we believe will impact all aspects of healthcare, from clinical diagnostic testing to the discovery and development of therapeutics, to healthcare delivery more broadly.

Despite the accumulation of healthcare data, we believe the healthcare system still lacks the integrated networks and modern analytical tools necessary to facilitate data-driven care at scale. The vast majority of healthcare data created today remains locked in silos and lacks harmonization due to decentralized institutions using non-standardized methods for collecting data, in addition to a large percentage of the data being in unstructured formats like free text (such as physician progress notes) and non-digitized images (such as pathology slides). Clinical outcomes data, to the extent it even exists, often remains disconnected from diagnostic data, and traditional laboratory tests provide results that are often based only on a single data modality that lack patient context. In addition, clinical and research decisions are too often made based on small sample sizes of historic data.

In order to bring AI to healthcare at scale, we began by rebuilding the foundation of how data flows in and out of healthcare institutions, which we refer to as the Tempus Platform. We have established data pipes, going to and from providers, which allow for the free exchange of data between physicians, who interpret data, and diagnostic and therapeutic companies, who provide data. Harnessing the power of this data at scale required a Platform that could break down data silos, collect vast amounts of multimodal data, structure and harmonize it, and deploy AI to make it useful for physicians and researchers to make data-driven decisions in the clinic or at the lab bench, thereby advancing precision medicine. Our access to broad and diverse data serves as the basis for our ability to train generative AI models, and we believe our relationships with healthcare institutions provide us with proprietary data to deliver on the promise of AI in healthcare. Without this Platform, we believe the data would continue to pile up at an increasing rate without improving patient care. We have built a version of this Platform and are now deploying it at scale in oncology in the United States, with other disease areas following.

Importance of Multimodal Healthcare Data

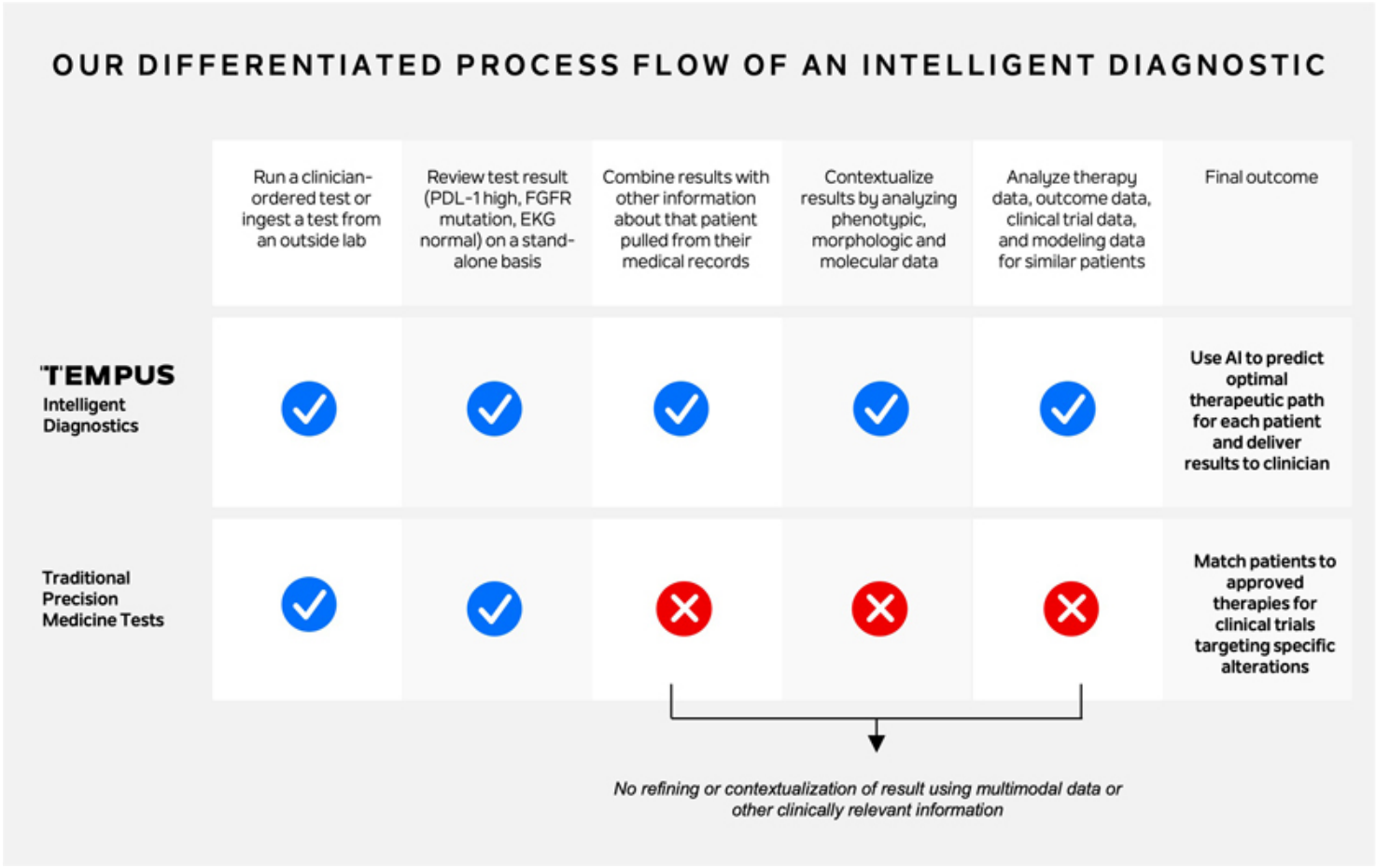
Technology is enabling the healthcare industry to collect data at an unprecedented scale, yet most datasets continue to be fractured or narrowly focused by disease type or data modality; almost none are comprehensive enough to provide a full picture of the patient and their clinically relevant characteristics. We set out to solve that problem by building a platform that collects broad datasets in near real time and at scale. Our Platform is differentiated in several ways. First, we collect data from multiple diagnostic modalities, including NGS, anatomic pathology slides, radiology images, and other laboratory tests. Second, the data we collect is often connected to EHR data, such as key phenotypic characteristics, therapeutic data, and clinical outcome and response data. Third, our Platform is multi-disease, spanning oncology, neurology, cardiology, and infectious disease. Our Platform is purpose built to deploy AI at scale, using multimodal datasets, across disease areas. We believe these differentiators have the potential to transform healthcare.

A New Industry: Intelligent Diagnostics to Advance Precision Medicine

While AI has the potential to broadly impact healthcare, we believe it will transform diagnostics first. Diagnostics, broadly defined, is the process of determining by examination or assessment the nature and circumstance of disease. Physicians use diagnostics all the time; they order blood tests, biopsies, scans, genomic tests, and others. Physicians rely on diagnostic results to make the vast majority of their treatment decisions. Researchers rely on diagnostic tests to better understand disease and make better decisions throughout their discovery processes.

The ability to leverage generative AI on top of large, harmonized, multimodal datasets provides the opportunity to make diagnostic tests more personalized, and therefore more intelligent. Intelligent Diagnostics incorporate an individual patient's longitudinal phenotypic, morphologic, and molecular data, including outcome data from the patient's EHR, to give laboratory test results clinical context. In doing so, Intelligent Diagnostics can leverage generative AI to make laboratory tests more accurate, tailored, and personal. The test result itself is designed to be specific to each patient and their own unique patient journey. The result is also informed by our large dataset that enables association of clinical outcomes and therapeutic response for patients who are similar to the patient being treated.

The process for making a diagnostic "intelligent" improves upon the process for performing genomic testing, by leveraging technology and data to add clinical context and therapeutic insights. An Intelligent Diagnostic requires the following: (i) perform a laboratory test or ingest results from a laboratory test; (ii) review the test results on a stand-alone basis; (iii) combine the stand-alone results with other forms of relevant clinical data from that patient's medical records; (iv) contextualize or reconfigure the stand-alone laboratory results to the extent necessary with the insight derived from that patient's clinical history; (v) include the outcome and response data of patients who are similarly situated to the patient for whom the test was ordered; and (vi) use generative AI to derive analytical and clinically relevant insights and provide those to the physician and patient. See below for an illustration comparing an Intelligent Diagnostic to a standard genomic test:



We believe the adoption and deployment of Intelligent Diagnostics will have a substantial impact on patient care. In oncology, for example, Intelligent Diagnostics have the potential to eventually incorporate insights using data from molecular and anatomic pathology, bioinformatics, genomic variant analysis, inherited cancer risk, computational biology, drug label data, noted adverse events, clinical trial data, research publications, investigational studies, care pathways, real world evidentiary studies, and phenotypic and morphologic data. We already have the ability to incorporate many of these data elements today.

The consequence of incorporating multimodal data is to make precision medicine "personalized" as opposed to "targeted." A targeted diagnostic test might find a specific condition or characteristic of a patient that is relevant to a particular therapy. For example, in cancer, a targeted diagnostic test may identify a genomic biomarker that could inform therapy selection, such as identifying a HER2 amplification that would allow a HER2 inhibitor to be prescribed to a breast cancer patient. The standard test to determine whether a HER2 amplification is present (other than at Tempus) is typically not designed to assess factors such as whether the patient is male or female, old or young, or has diabetes or a heart condition. Nor does the standard test consider the medication the patient has taken or is currently taking, or the adverse events the patient has experienced.

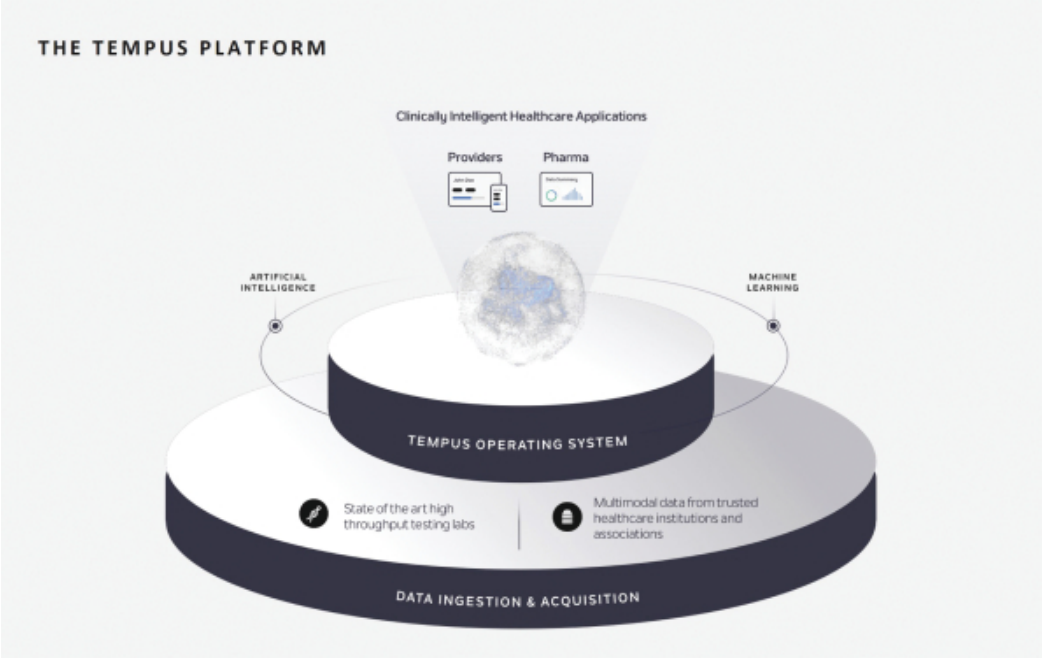
An Intelligent Diagnostic test, by contrast, might recommend specific therapies based not just on a singular characteristic, but on the comprehensive profile of the patient who will receive the proposed therapy. For example, an Intelligent Diagnostic might highlight that the breast cancer patient should consider immunotherapy before taking the HER2 inhibitor, or might highlight a series of adverse events the physician should be aware of based on other phenotypic characteristics for that patient, such as if the patient had a heart condition and therefore an elevated risk of a cardiac adverse event from taking the HER2 inhibitor. By linking multimodal data regarding both the disease, such as cancer or diabetes, and the host, our tests can provide a more comprehensive and holistic view of the patient and reconfigure results based in part on the clinical data we collect and the aggregate information in our database.

Intelligent Diagnostics also have the potential to disrupt the clinical trial process. Today new therapies are typically approved based on randomized clinical trials that apply to broad populations and demonstrate incremental improvements over the existing standard of care. The current process suffers from several inherent flaws. First, clinical trials are generally expensive and slow to complete. Second, if and when therapeutics are approved, they can have less of an impact on the larger population than the trial population, given an inherent bias on who has access to academic medical centers and emerging studies. Third, many new therapies are only effective on a subset of patients that enter clinical trials.

We believe Intelligent Diagnostics, AI, and technology broadly can help solve these problems. We believe our ability to contextualize test results to individual patients, to incorporate real world evidence at scale, to identify patterns across similarly situated patients, will help physicians make better, data-driven decisions—which drug to prescribe, which trial to consider, and so on.

The Tempus Platform

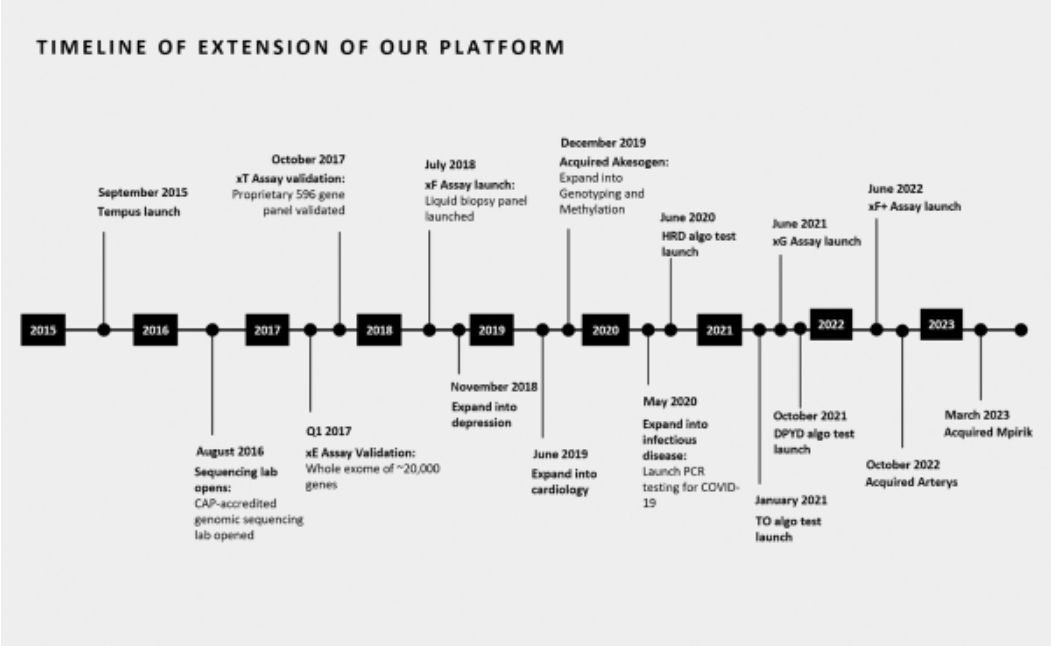
Tempus set out to build proprietary technology to implement Intelligent Diagnostics and to facilitate access to, and use of, the resulting datasets. The Tempus Platform connects multiple stakeholders within the larger healthcare ecosystem and provides both the technical infrastructure for what we consider to be one of the world's largest libraries of matched clinical and molecular data, and an operating system to make that information useful. Our Platform is end-to-end and vertically integrated. It allows us to ingest data from providers, perform diagnostic testing upon request, generate results leveraging our multimodal database, and provide clinical context for a specific patient. Below is a graphic illustrating our Platform's core functionality.



We believe our AI-enabled Platform can provide unique value whenever two conditions exist: a heterogeneous diseased population and a variety of therapeutics or therapeutic pathways, which are often prescribed based on trial and error. For example, in oncology, there is a diverse population diagnosed with cancer, and each subtype has different characteristics. The combination of unique patient characteristics and different cancer subtypes results in a variety of phenotypic attributes (old, young, male, female, black, white, etc.). In addition, there are hundreds of possible therapeutic paths to consider in cancer (surgery, radiotherapy, chemotherapy, targeted therapy, immunotherapy, etc.). These conditions create an ideal backdrop for the benefits of big data and AI.

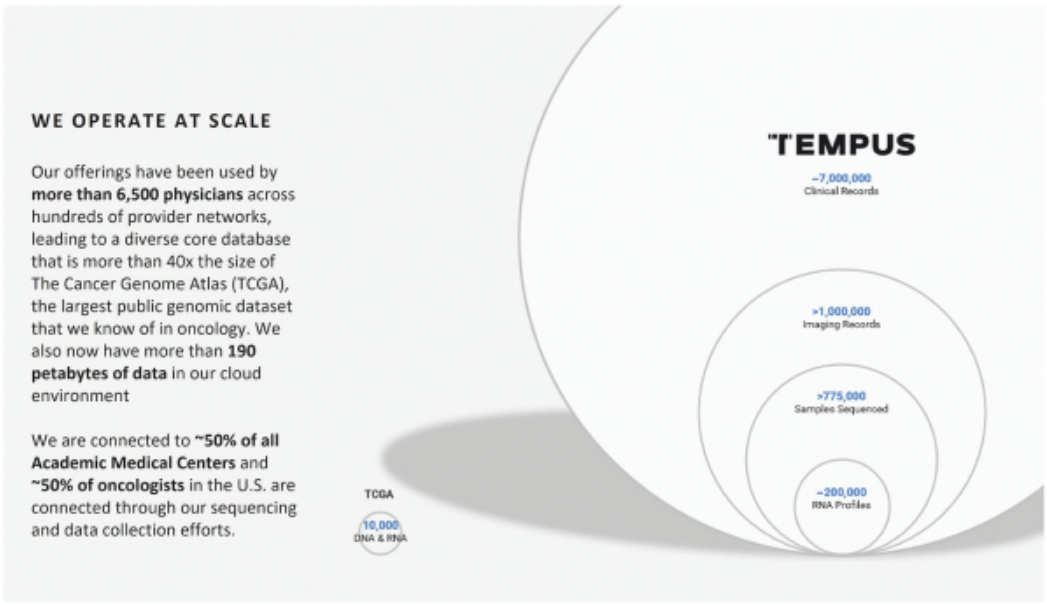
The same is true in neuropsychology. A heterogeneous population suffers from numerous neurological disorder subtypes, such as depression, anxiety, bipolar disorder, and other psychiatric conditions. Like oncology, there is a diverse patient population and a number of prescribed antidepressants, often based on trial and error. Further, the complexity of oncology, neuropsychology, and many other major causes of morbidity necessitate a multimodal data approach, as any single modality (e.g., DNA-only) is unlikely to provide enough information to differentiate meaningful patient subgroups. We believe technology and AI should facilitate data associations and substantially reduce the guesswork associated with which drug to prescribe, in what amount, and in which order.

Facilitated by our relationships with many leading hospitals across the healthcare system in the United States, we believe we are well positioned to introduce precision medicine at scale across multiple disease categories and drive adoption of our Platform and novel AI solutions. We are leveraging our ability to collect, structure and harmonize data, and deploy AI on large datasets to facilitate precision medicine broadly. We initially deployed our Platform in oncology, expanded substantially within oncology, and recently extended into neuropsychology, radiology, and cardiology. Below is a timeline of our Platform's evolution, both within oncology and into different disease categories:



Core Elements of our Platform

The Tempus Platform combines multiple elements into a vertically integrated infrastructure that enables us to ingest data from providers, structure and harmonize the data into a common database, provide laboratory diagnostic testing, and deliver personalized results that provide clinical context by leveraging our data. We offer closed-loop, full-stack, bi-directional integrations between a clinician's desktop and our laboratory diagnostic capabilities, analytics platform, and repository of multimodal data. Our scaled, interconnected provider network covers more than 50% of U.S. oncologists and provides us with broad data rights, including the rights to longitudinally updated data from time to time. The combination of our Platform and vast provider network yields a powerful flywheel that continues to become more accurate and precise as more patients are added, thereby compounding the network effects of our offering. We believe each of these elements is difficult for competitors to replicate, and together represent a significant advantage. The following diagram represents the different elements of our Platform.



Ingestion and Generation of Data

We ingest healthcare data in near real time and at scale, including molecular, clinical, and imaging data. Between our sequencing and data collection efforts, we are connected in some way to more than 50% of all oncologists practicing in the United States, along with a growing number of patients in neuropsychology, cardiology, and infectious disease. Our methods for collecting and creating data include the following:

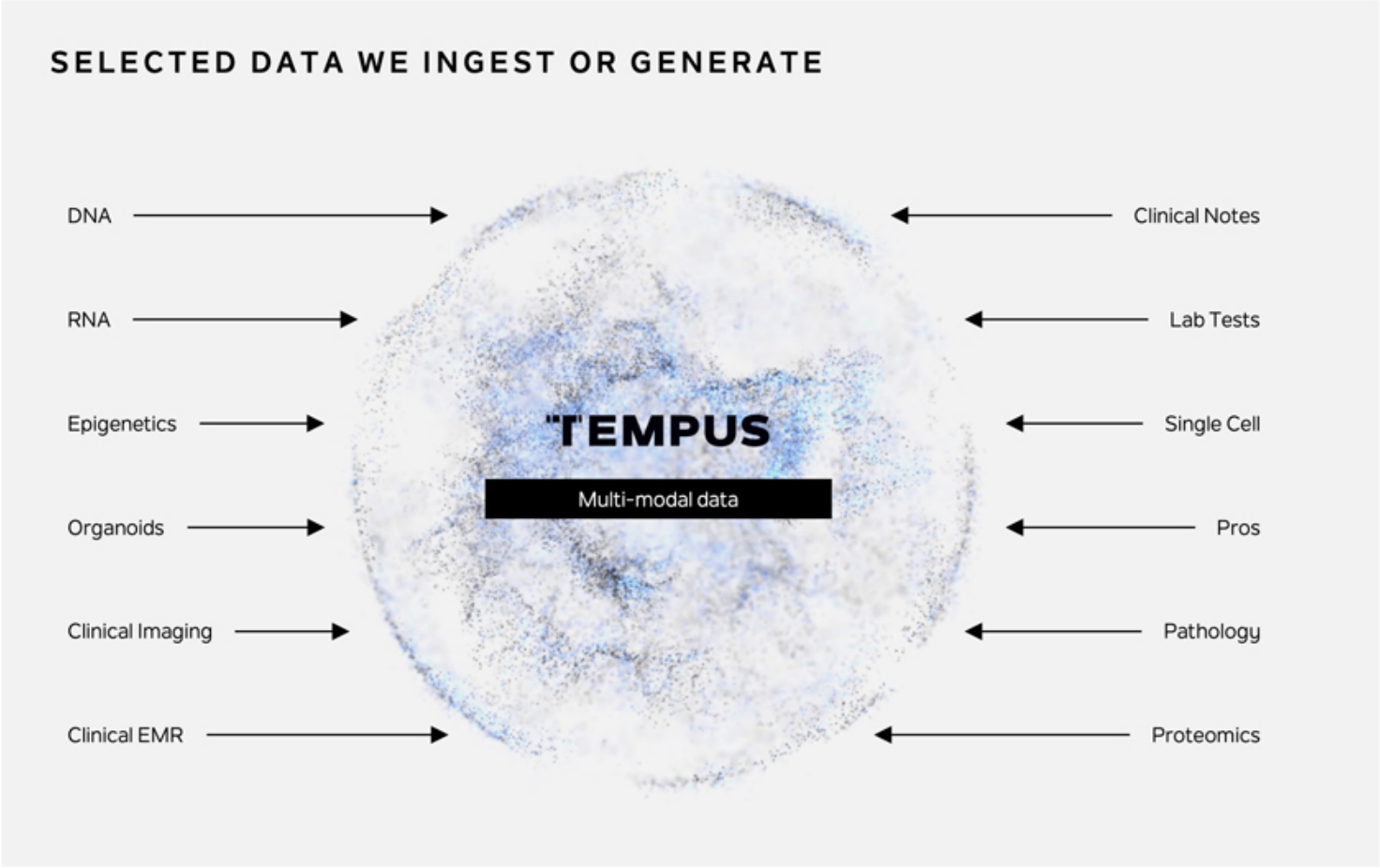
Ingesting data through our relationships and partnerships with healthcare providers. We have developed proprietary tools to establish more than 500 direct data connections, across approximately 2,000 hospitals, many of which are bi-directional. We have established relationships with hundreds of provider networks, including approximately half of all academic medical centers in the United States. To obtain data from these sources, we use a variety of near real-time connections (e.g., HL7, FHIR) and batch data exchanges. Healthcare institutions supply us with this data in our capacity as a covered entity (for example, when we provide NGS services on behalf of a patient), or as a business associate (for example, when we provide clinical trial matching services or data de-identification and structuring services). We ingest and structure data using optical character recognition, or OCR, natural language processing, or NLP, and proprietary workflow tools along with manual data curation. Our proprietary tools connect to a provider's EHR system, data warehouse, or their third-party data provider to pull out relevant structured and unstructured data that the provider has agreed to provide to Tempus, including longitudinal follow-up data to the extent the provider has made such data available. To facilitate these data-sharing relationships, we have developed software products and services that align to our customers' interests by helping providers use our software tools to improve patient care. In certain circumstances, we cover the actual direct costs associated with the technical integrations needed to create a data connection. We cover these costs to help facilitate providers' contribution of data and their corresponding use of our products, which then makes our tests more intelligent and helps them to facilitate the delivery of better care. We generally retain the rights we acquire in de-identified data even if our contractual obligations expire or are terminated.

Relationships with industry associations. In addition to healthcare providers, we work with numerous industry associations in the United States, such as ASCO. Under our collaboration with ASCO, we structure and distribute the oncology data ASCO collects as part of CancerLinq, which is their oncology data effort.

We work with other large associations such as Quality Cancer Care Alliance, or QCCA, and National Cancer Care Alliance, or NCCA, and have agreements in place with large integrated community practices. While our relationships in oncology are widespread, we are making inroads in other disease areas. For example, we are working with a large hospital network to train algorithmic models based on a de-identified subset of approximately 3.5 million ECGs, across more than 700,000 patients, with decades of longitudinal clinical data, including outcome and response data. We also have agreements with numerous other institutions through both our sequencing and data efforts to collect and structure multimodal infectious disease data, and have entered into a variety of partnerships and collaborations across neuropsychology, diabetes, and cardiology giving us access to additional clinical data.

Laboratory diagnostics. In addition to our dedicated data pipelines, we generate data for our Platform from our three high-throughput diagnostic testing labs in Chicago, Atlanta, and Raleigh. Our labs offer a range of anatomical and molecular NGS tests, including a broad portfolio of solid tumor and liquid biopsy cancer tests. Our laboratory offerings enable us to populate our database with connected and comprehensive molecular, clinical, and morphologic data that has been de-identified. We also make available an unrestricted copy of the raw files containing the rich data we generate in the laboratory, along with any clinical data we curate, to the providers who order our tests, to further enable their own research efforts.

We ingest and generate a variety of different types of data from different sources. The following represents selected data modalities that we collect and aggregate into our database.



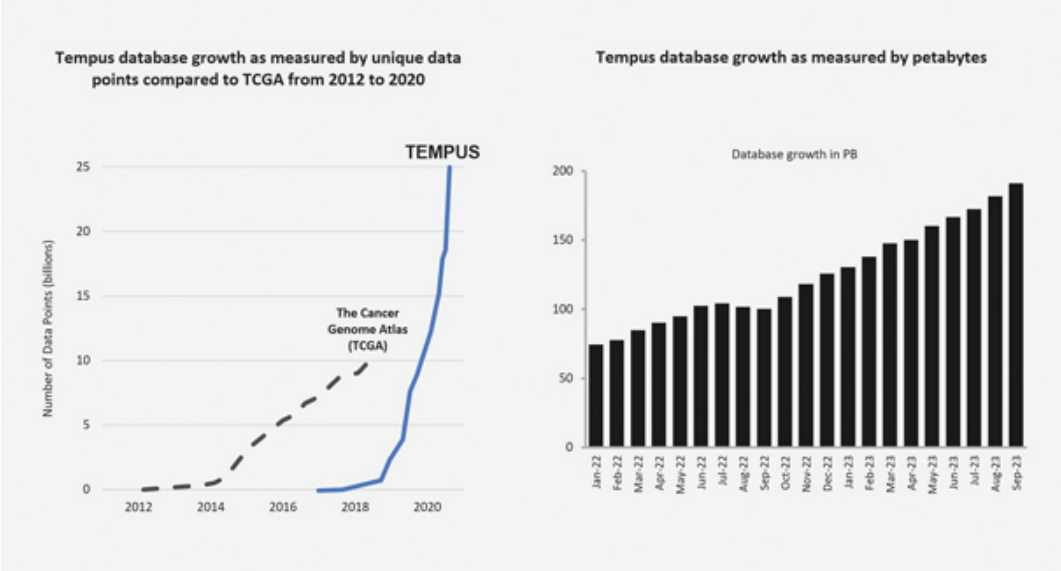
Proprietary Data Processing

Once data is ingested, we apply AI and other technologies, including algorithmic agents that leverage large language models, to organize millions of records into a common format that spans a variety of data types. For example, we organize clinical data from unstructured documents and structured EHR fields, and typically digitize whole-slide pathology images as part of our clinical workflow. We then combine this data with the molecular data that we generate

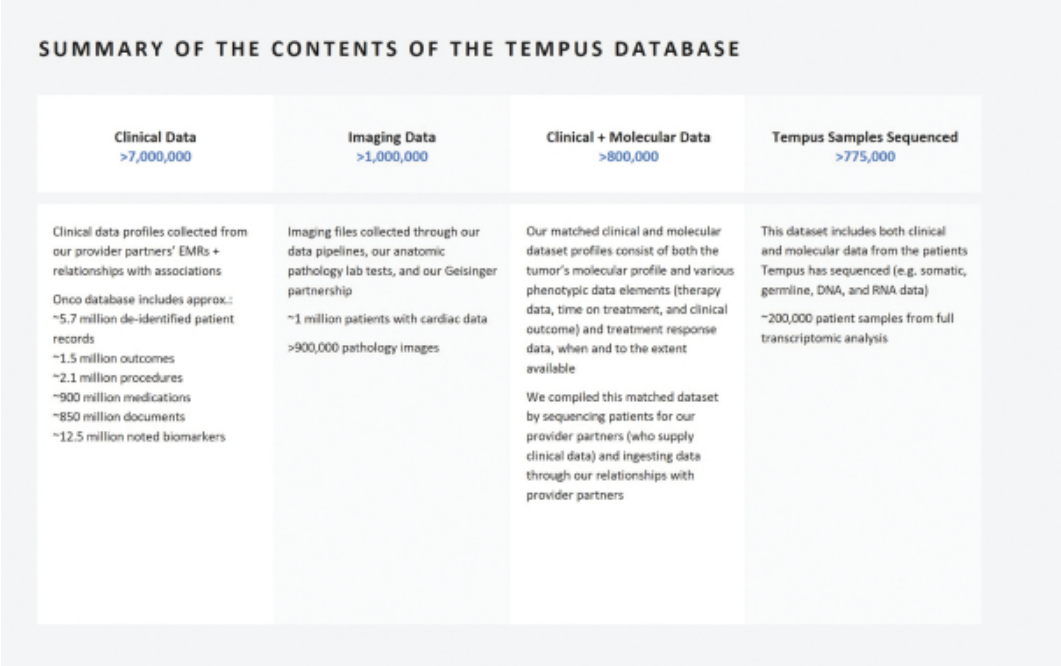
in our labs or process from third parties, giving us a more comprehensive profile of patients. Unstructured data housed in physician notes and other documents is processed using OCR and NLP, mapped to Tempus' Medical Ontology, and routed to data abstractors for further curation and quality control. Typically we receive identified data, either in our capacity as a covered entity under the Health Insurance Portability and Accountability Act, or HIPAA, or to the extent we have a business associate agreement with the provider. Following abstraction and structuring, we de-identify data and only retain the resulting de-identified dataset, other than through our obligations to retain selected identified data as a covered entity providing laboratory tests to clinicians. Many clinicians who order Tempus tests clinically are also involved in research related activities. By making this organized and structured data available to the clinicians (along with raw files associated with the testing we perform) we serve, those clinicians can use the data to further their own research efforts to help patients.

Proprietary Multimodal Database

We believe most healthcare databases lack real-time functionality, depth among data types, and the scale of matched clinical and molecular records needed to meaningfully improve therapeutic research and development. Tempus is attempting to solve this problem by democratizing the use of molecular, clinical, and imaging data at scale. As our testing volume has grown, and as our dedicated data pipelines have expanded, the size of our database has increased exponentially. Since we launched our Platform in 2016, Tempus has amassed over 800 million documents, across more than 5.7 million de-identified patient records, including approximately 1.3 billion pages of rich clinical text that we use to train our large language models. The database also includes over 1,000,000 records with imaging data, more than 800,000 with matched clinical records linked with genomic information, and approximately 200,000 with full transcriptomic profiles. Within oncology specifically, we believe this represents one of the largest and most comprehensive molecular libraries of cancer patients in the world. The breadth of our database, the quality and diversity of our data, as well as its regularly updating nature, allow us to offer a variety of AI-enabled solutions to the market. We believe our unique data set will enable us to bring the benefits of generative AI and large language models to healthcare, as our curated, multimodal database can be used as a proprietary training set to build a variety of AI based applications, which we intend to deploy through our existing network and distribution platform. We also retain the rights to broadly commercialize de-identified data. As our database continues to grow from its current size of more than 190 petabytes, we believe new AI applications and opportunities will emerge that are only possible with scale, driving innovations in patient treatment that were previously unattainable. The following diagram represents the growth of our database over time.



Another valuable attribute of our dataset is the number of different data modalities represented. We believe multimodal data is a necessary predicate to successfully build and deploy AI-based applications given the complexity of disease and the various attributes across different forms of data (e.g., text, images, molecules, etc.). As of September 30, 2023, our database included the following types of data, among others:



Footnote: Our clinical data typically includes the following information to the extent provided and abstracted by Tempus: unique identifier; age; sex; race/ethnicity; histology; stage of disease; sample type (primary vs. metastatic); anatomical site of sample and method of procurement; cancer treatment history, including therapies administered; timing of relapse and timing of treatments, including cancer-related treatments and surgery; genomic profiling results (e.g., internal, external providers); tumor response; progression free survival; RECIST or equivalent; ECOG/Karnofsky scores, or equivalent; and adverse events.

Proprietary Software Tools and Solutions

We have developed numerous software tools and applications to help make our services accessible to multiple constituencies within the healthcare ecosystem and support our various product lines. We believe this system architecture, which employs AI techniques such as neural networks, deep learning, and other statistical techniques, along with proprietary software tools and applications, represents a key competitive advantage that will be difficult for others to replicate. We describe below some of the core software applications that form part of our Platform.

External Facing Applications

We have two primary software applications that serve as interfaces for different markets and allow our customers to interact with our Platform. Hub is our clinical application for physicians and other healthcare providers and is used primarily in our Genomics product line as an end-to-end application for healthcare providers who use our NGS tests. Lens is our application for life sciences customers and other healthcare researchers, launched in May 2021. Lens is aligned with Insights, one of our products within Data, and allows users to identify, license, and ultimately analyze cohorts of data for research purposes. We typically enable our customers to access free or charge certain software

applications (like Hub) and certain features of other applications (like Lens). However, in some cases we may charge for access to Lens when a customer is interested in some form of customization or access to Lens' full suite of capabilities.

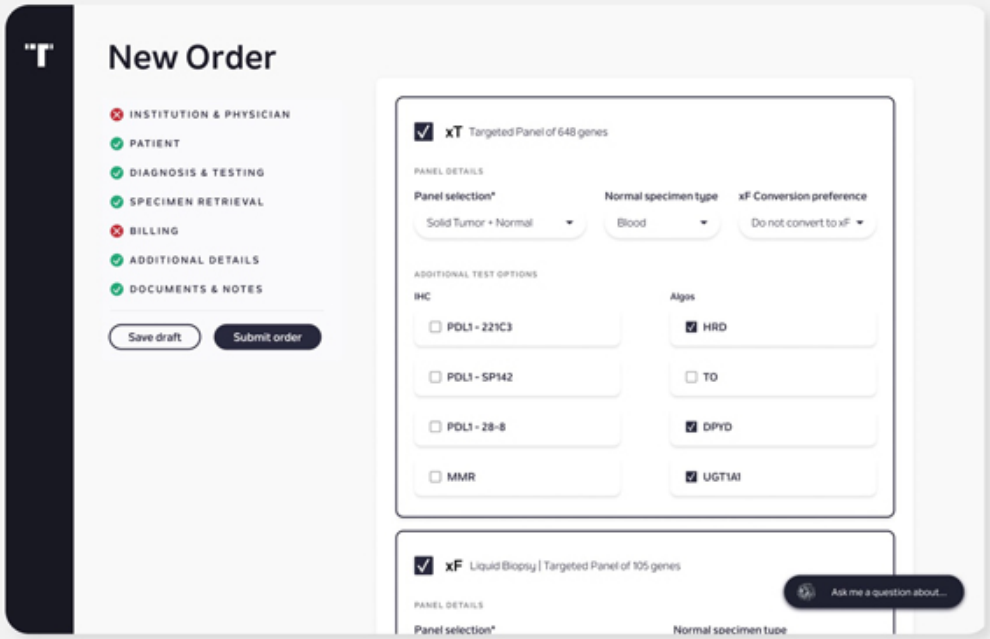
Hub

Hub can be accessed on the web or through our mobile applications. Hub enables physicians and other providers to interact with our Platform, place orders for our laboratory tests, track them through the sequencing process, view results, and develop treatment plans using the other information Tempus makes available. Hub streamlines and automates what previously required a significant investment of both time and resources for those ordering and delivering genomic reports.

A physician's experience, through Hub, typically begins with our online ordering feature, which presents providers with Tempus' various test options and guides users through the ordering process. Once Tempus has processed an order and sequenced a specimen, Hub synthesizes information across our various tests, orders, and patients, and presents the information in a consumer-friendly interface. For example, Order Summary synthesizes information from various clinical orders, test results, and other information relevant to a patient's course of treatment. A typical patient might have multiple sequencing events over time. Hub visually presents all of a patient's results side-by-side, so a treating physician can comprehensively view how a patient's disease has changed over time, including in response to therapy. Hub also provides care teams a robust set of search and filtering tools so they can navigate our Platform. Physicians can use Hub to identify similarly situated patients or patient sub-groups, including by specific molecular alteration. Physicians can also export and download the resulting dataset for further analysis.

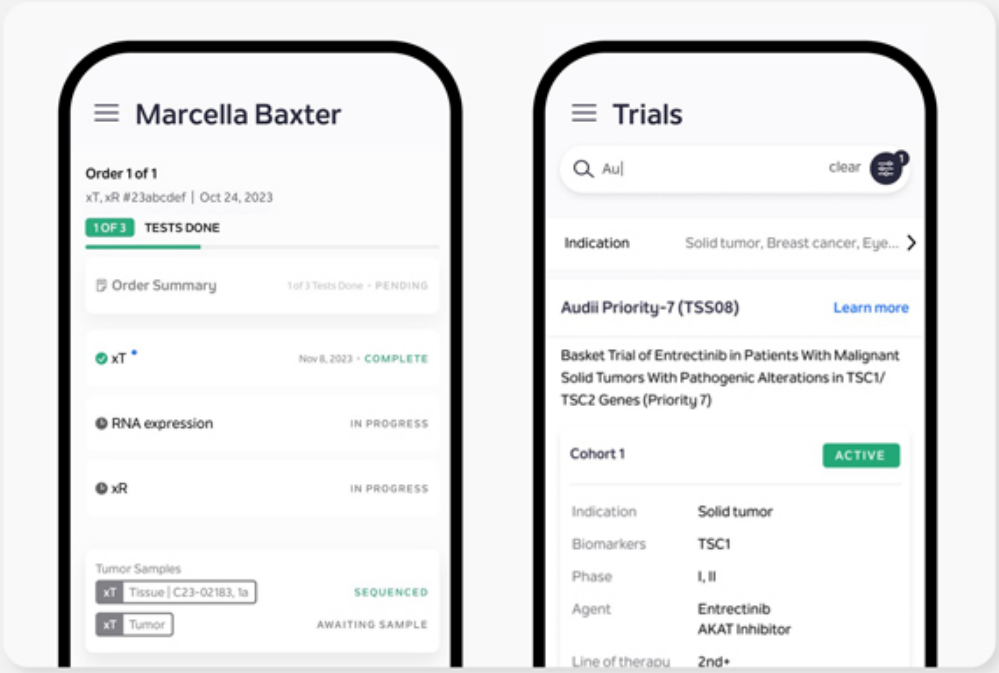
Hub offers additional functionality that goes beyond ordering and presenting clinical results. Our clinical trial system, for example, handles the complexities of matching patients to clinical trials, by synthesizing clinical and molecular data matched against inclusion and exclusion criteria for the trial. It even allows physicians to activate their point of care as a clinical trial site, if approved by the trial sponsor, in order to easily enroll patients who would otherwise not have access to experimental therapies. The proprietary features within Hub put powerful analytics in the hands of physicians, allowing them to pursue research opportunities using accessible molecular data, and explore immune insights such as HLA type, immune infiltrates and neoantigens. Finally, Time on Therapy provides physicians a view into the Tempus Precision Medicine Library, which includes the treatment paths of patients within our de-identified database who display similar molecular or phenotypic profiles to their own patients. These tools enable new patients to potentially benefit from the experience of those that came before.

We include below some illustrations depicting some of Hub's capabilities:



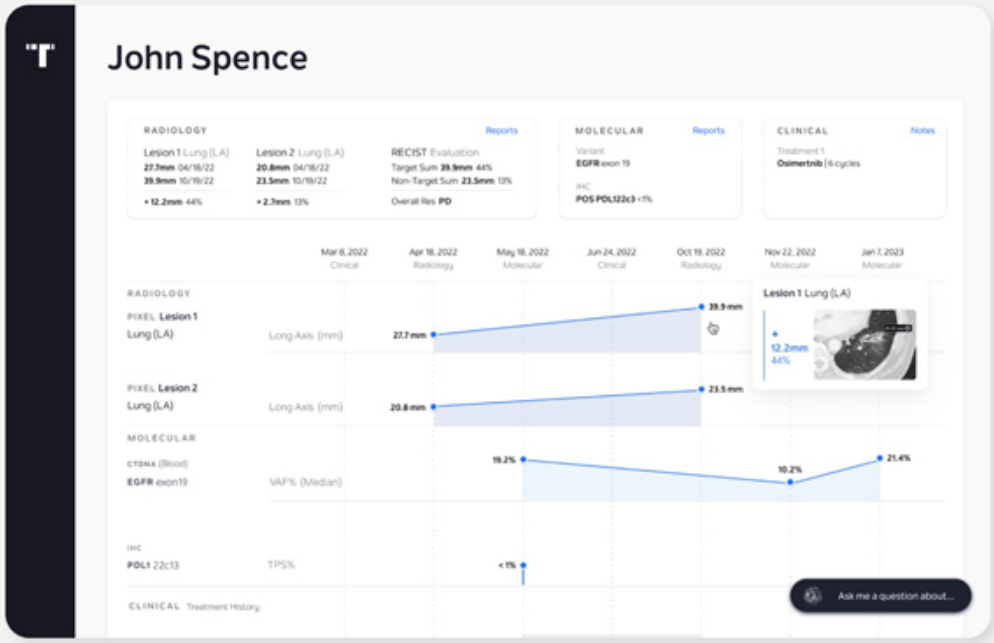
ONLINE ORDERING

Online ordering guides users through the ordering process allowing them to discover new test options relevant to their patient.



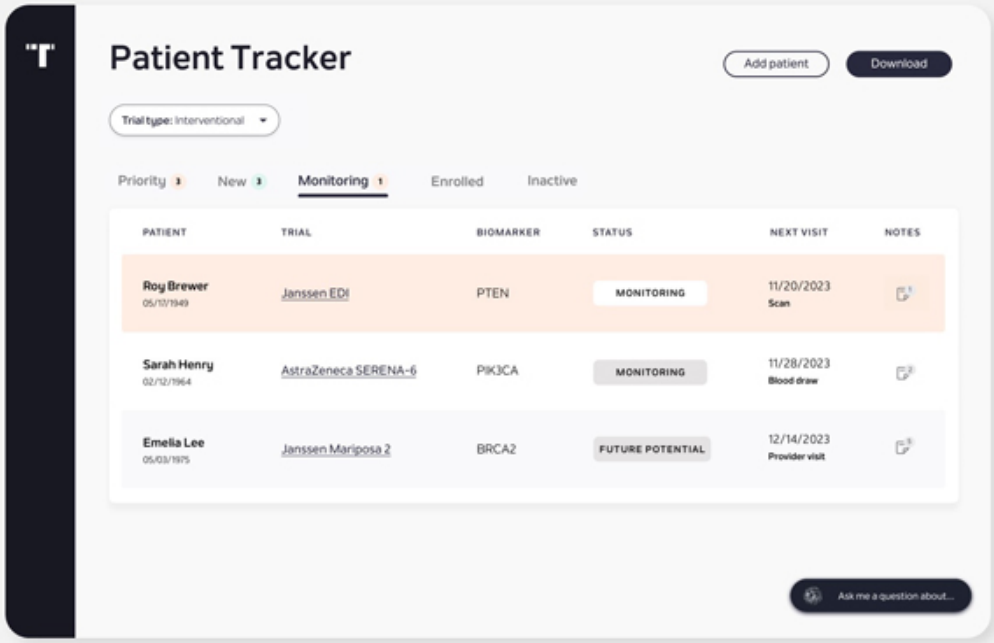
MOBILE APPLICATION

The Tempus mobile application gives users access to the full Tempus experience, even when they are away from their computers. Reports are rendered in interactive views optimized for mobile devices. Physicians can help their patients enroll in trials using their phone.



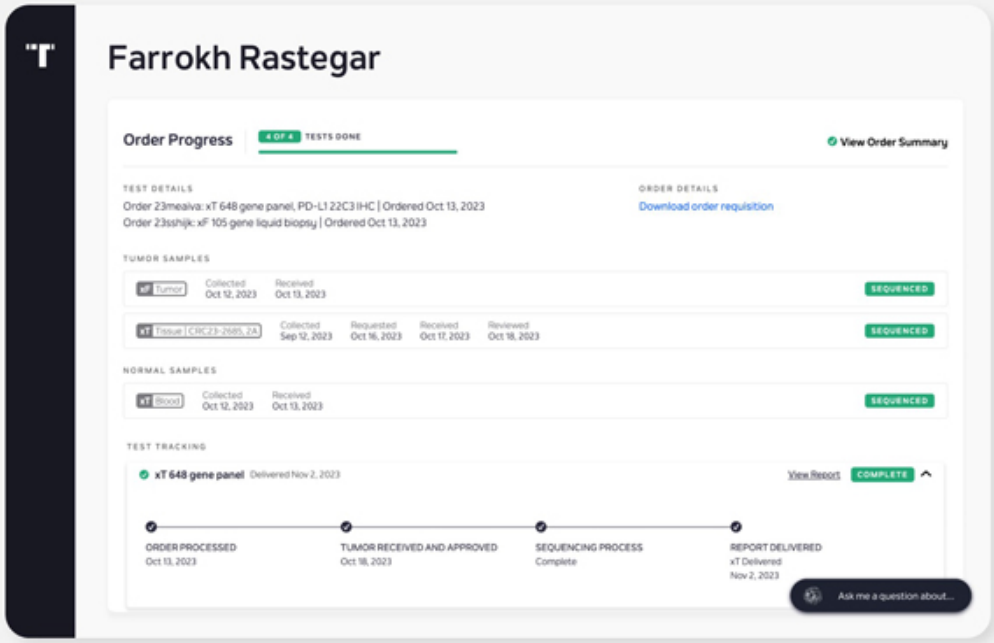
PATIENT SUMMARY

The patient summary interface surfaces all data about a patient in one place. Physicians can see detailed info about orders, such as the estimated delivery date. They can place orders on hold or convert them from solid tumor sequencing to a liquid biopsy. Completed results are summarized in a longitudinal view across orders.



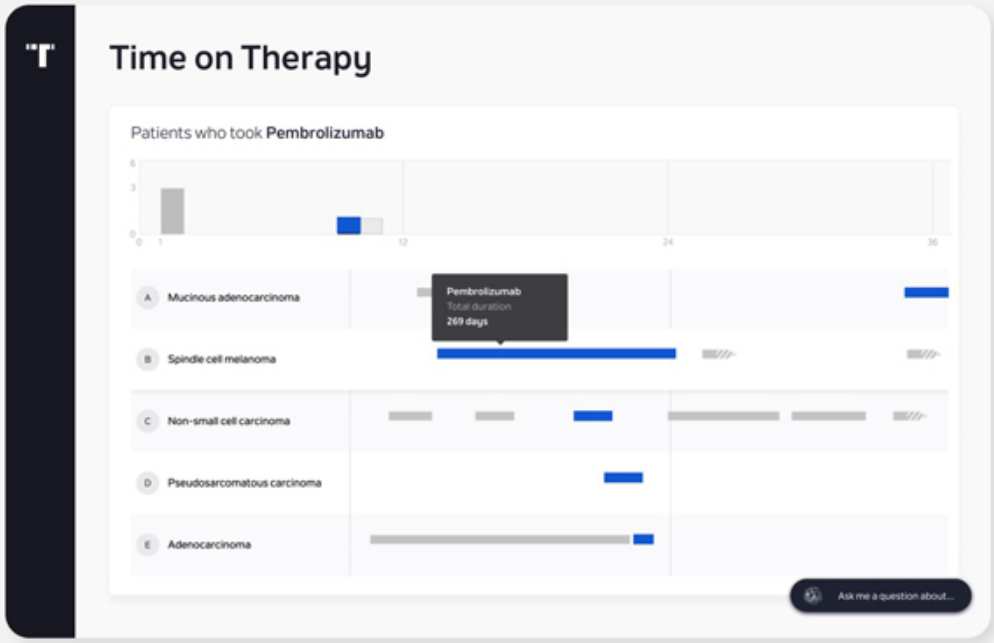
CLINICAL TRIALS

Tempus handles the complexities of clinical trial matching via Hub. A user can help their patient enroll in a clinical trial with minimal keystrokes.



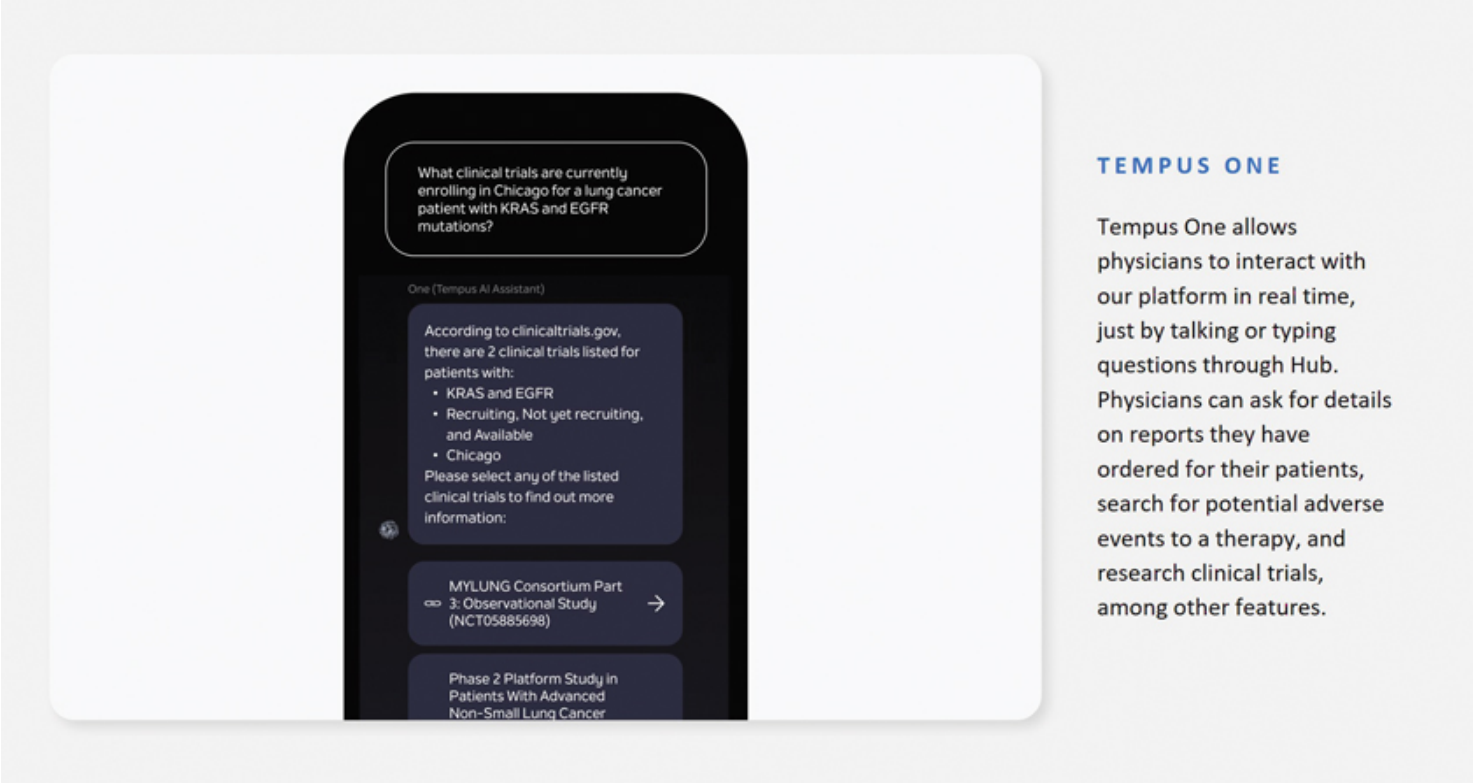
ORDER SUMMARY

Order summary brings the important findings from a patient's order into a single, easily referenced document. It also allows Tempus to deliver insights from the broader Precision Medicine Library that are specifically matched to the patient case under review.



TIME ON THERAPY

Time on Therapy allows physicians to compare their patient with thousands of similar patients in the Tempus Precision Medicine Library, enabling a deeper understanding of the effectiveness of particular therapeutic regimens.



Lens

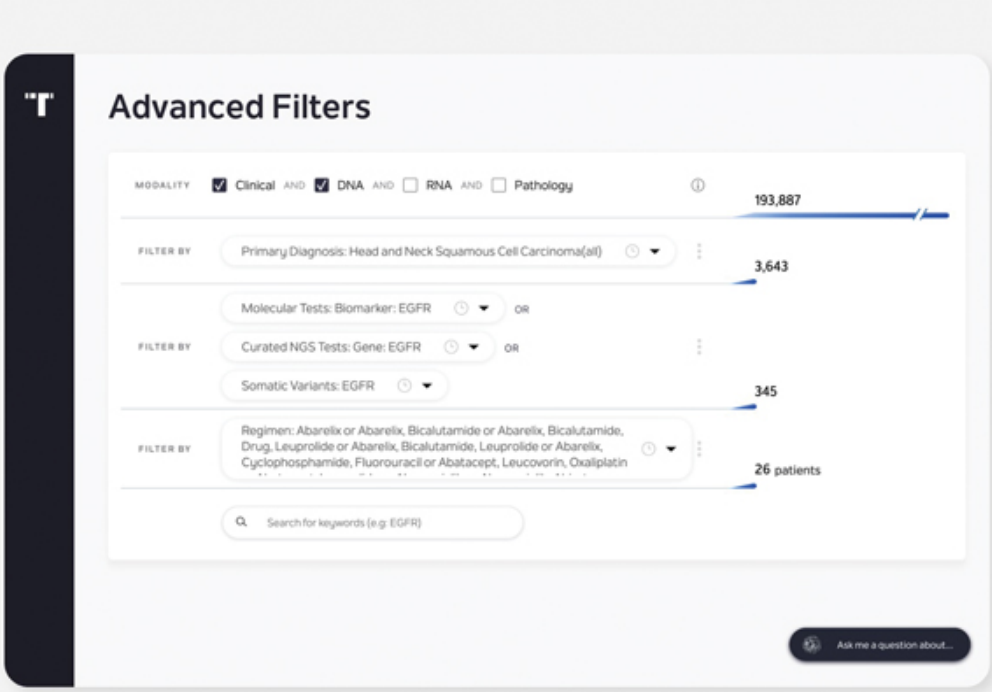
Lens is our software application for life sciences and advanced precision research. We designed Lens to expose our multimodal, de-identified dataset to two main constituencies: (i) clinicians interested in exploring data related both to their own patients and to similarly situated patients from the broader Tempus dataset, and (ii) pharmaceutical and biotechnology clients that are focused on drug discovery and development and want to explore our dataset and/or supplement their own analytics with our tools and data.

For clinicians, Lens helps users filter our multimodal database to identify groups of patients that meet their research requirements. It allows browsing, segmenting, selecting, and analyzing cohorts of patients using a variety of clinical, molecular, and demographic characteristics. We generally make these aspects of Lens available to our customers without charge because such access helps our customers identify data cohorts of interest and facilitates data licensing opportunities.

In addition to this basic functionality, Lens allows advanced computational users to perform robust analytics using our cloud-and-compute infrastructure and modeling tool set. We launched certain of these advanced features in May 2021, one of which is called Notebooks, a proprietary tool that allows users to run their own AI models within our cloud-and-compute environment, taking advantage of fast and streamlined access to our data and computational infrastructure, and saving researchers time and money. Over time, we intend to enter into separate subscription agreements, and charge separately, for expanded access to Lens and the increased functionality we intend to provide to our users.

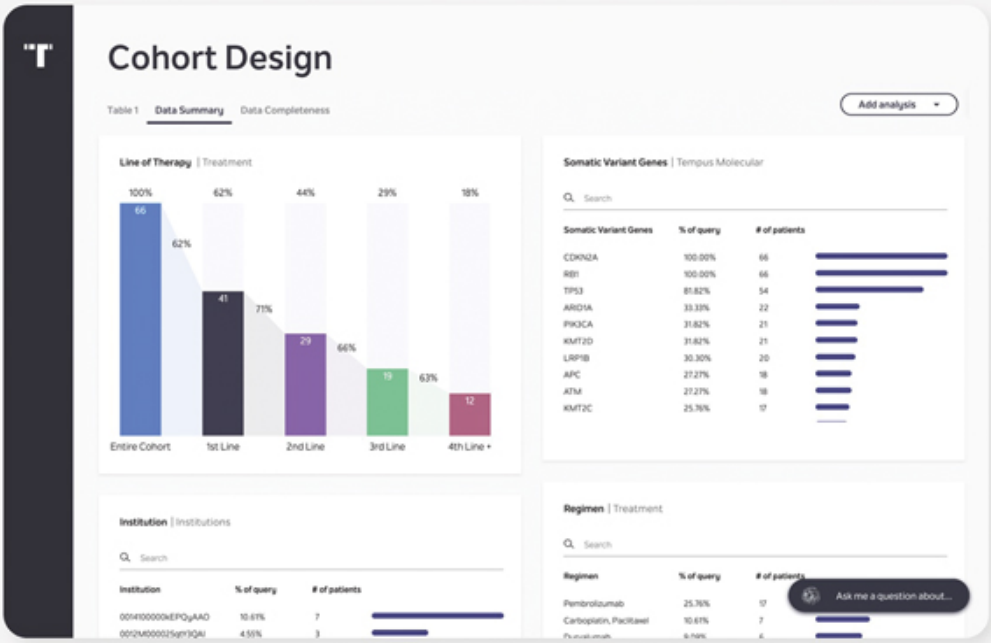
We believe that as Lens evolves, it has the potential to redefine life sciences research as investigators can both use our tools for their computational needs and instantly download the data they need for their analysis. We are not aware of any other application in oncology, or any other major disease area, that allows researchers to build large multimodal cohorts, utilize advanced analytics capabilities to explore the data, and download data for deeper analysis in near real time.

We include below some illustrations depicting some of Lens' current capabilities, which we expect to continue to expand and enhance over time:



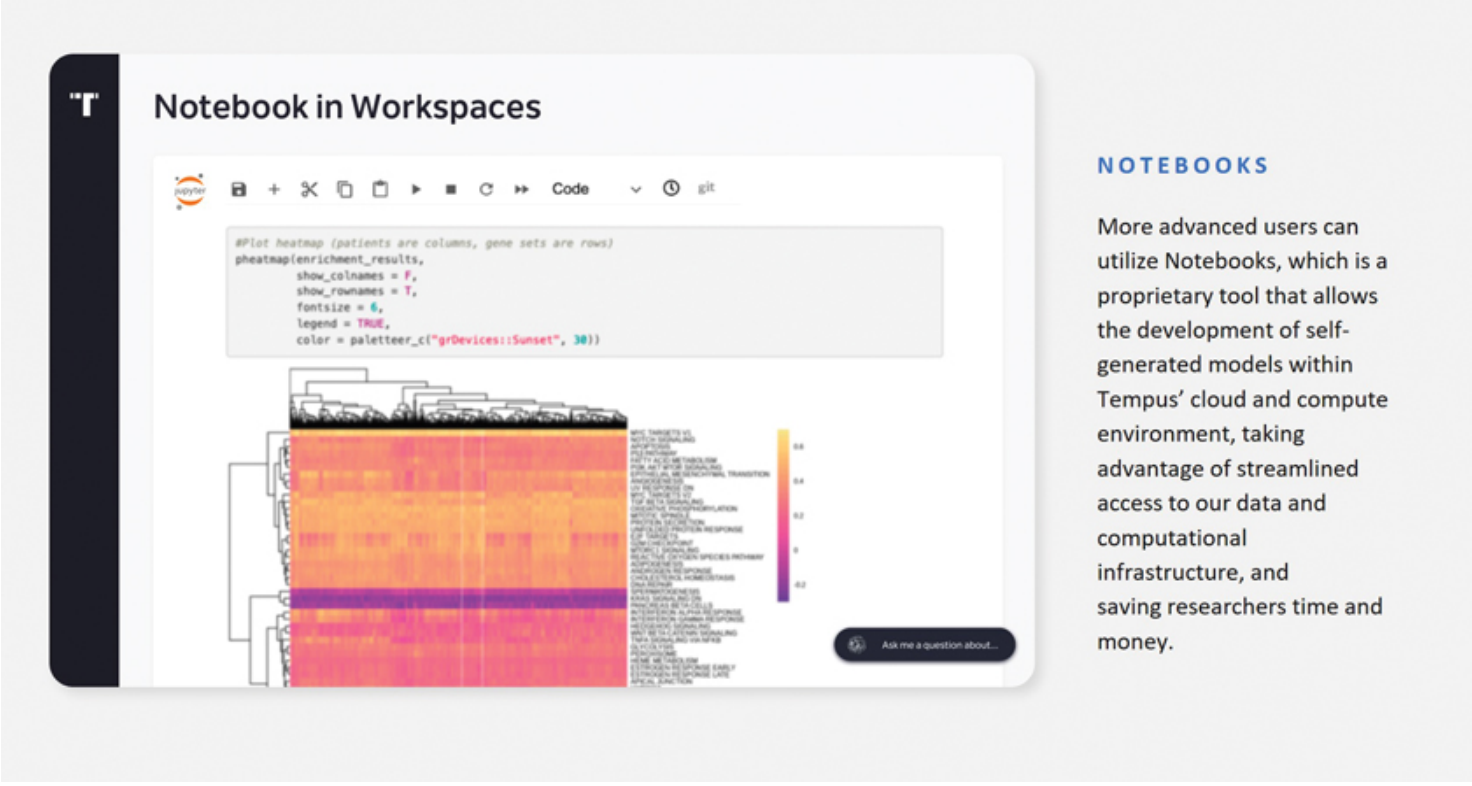
ADVANCED FILTERS

Advanced filters empower users to define and refine a subset of the full dataset based on precise clinical and molecular characteristics, and/or the availability of specific data (e.g. DNA results, RNA, or imaging).



COHORT DESIGN

Researchers can quickly build cohorts of interest and explore the unique data elements of the cohort they have designed. This allows researchers to ascertain if their cohort is sufficient for the questions they are trying to answer and the studies they are trying to conduct.

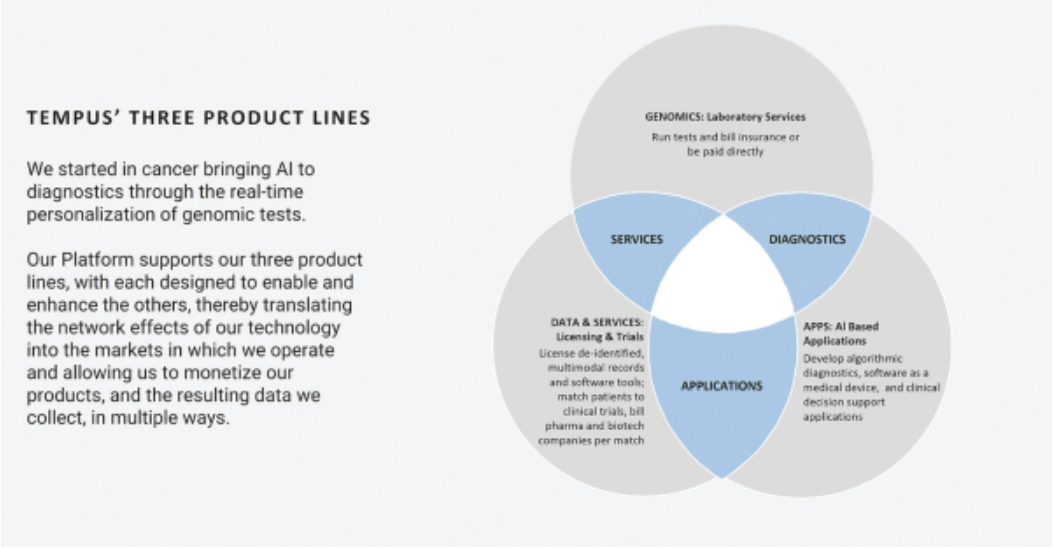


Other Software Applications

Our software applications extend beyond the oncology space. In the neuropsychiatry space, for example, we have built a series of proprietary and customized applications that are oriented around depression and other related psychiatric conditions. In addition, we licensed a customized software tool, which we call TempusPRO, that helps track patient reported outcomes, which we integrate into Hub. Patients use the mobile application to complete regular and systematic check-ins, while providers use the tool to view clinical reports and review the patient reported information. We have developed this application to empower providers to make data-driven, personalized treatment decisions, as well as collect outcome measurements on a regular, longitudinal basis in an effort to build one of the largest real-world multimodal datasets in psychiatry.

Our Three Product Lines

Our products are organized under three product lines, with each product line designed to enable and enhance the others, thereby creating network effects in the markets in which we operate. Our Genomics product line provides a broad range of diagnostic testing services to healthcare providers. Our Data and Services product line monetizes de-identified data that we collect and facilitates enrollment in clinical trials. Our AI Applications product line leverages our database to provide diagnostics entirely driven by data. Our three product lines and their corresponding product offerings are illustrated in the diagram below:

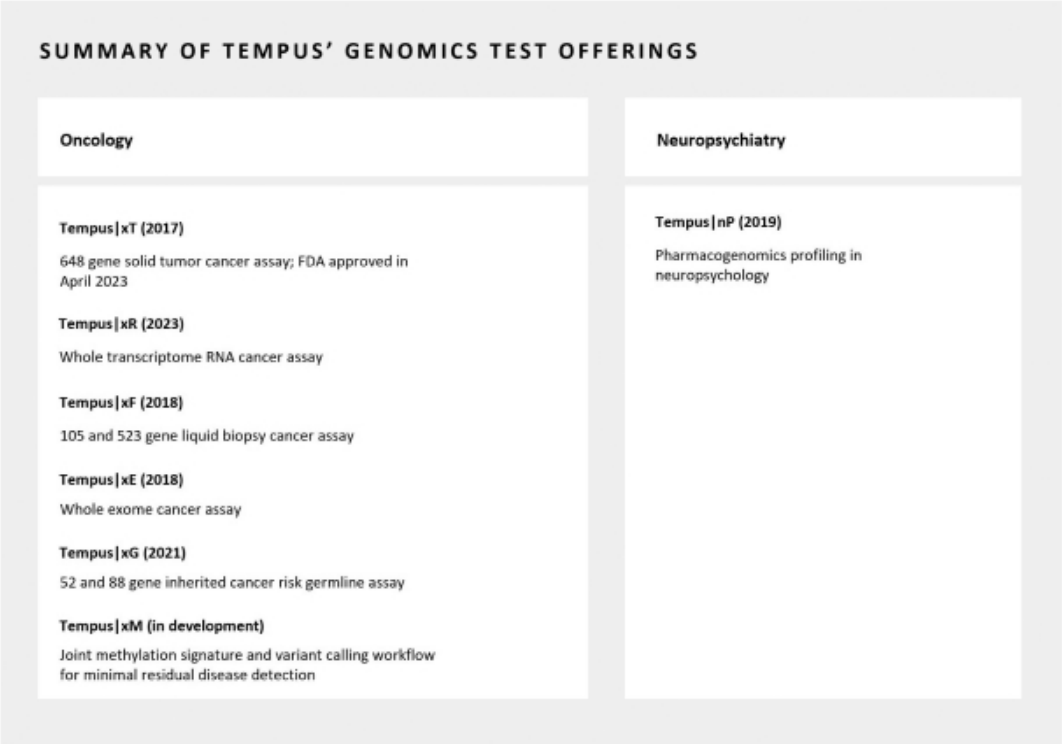


We believe the interrelated nature of our three product lines is unique. Our business model allows our clients to unlock value from our data, and allows us to monetize that data (in de-identified format), in different ways across our different product lines. We believe these network effects and the compounding impact on the value of each data record in our database enhance our competitive advantages.

Genomics

We launched our Genomics product line to provide a comprehensive suite of Intelligent Diagnostics to healthcare providers, and to generate a steady stream of molecular data to help fuel growth in our Data and AI Applications product lines. As we run more tests through our laboratories, and as those tests are linked to patient records and clinical outcomes, we grow our data assets and leverage them across our other product lines. We operate three laboratories that provide NGS diagnostics, PCR profiling, and other anatomic and molecular pathology tests. We have broad capabilities across genomic, transcriptomic, proteomic, microbiomic, epigenetic, and methylation-based assays, and our laboratory infrastructure allows us to operate as a high-quality, low-cost sequencing provider broadly serving the market. However, unlike traditional laboratory diagnostic tests, our tests can be connected to other types of data, in some manner, which allows our suite of diagnostic tests to be self-learning, becoming more accurate and precise with each test that we run. Furthermore, rather than providing a result based on a single data modality, such as a DNA mutation, our Platform leverages data from other modalities and other patients in an effort to be more comprehensive.

We are generally paid for our Genomics services by billing insurance companies, or patients directly, who reimburse us for the tests we run, or by billing providers or pharmaceutical companies directly. The following diagram represents a summary of our test offerings as of September 30, 2023:



Our Oncology Tests

Our Platform's first application was in oncology, where we have built a versatile portfolio of cancer tests spanning solid tumors and hematologic malignancies, germline and somatic variants, and tissue and liquid biopsies. Since our inception, our approach to precision oncology has been to provide comprehensive genomic profiling through NGS that enables us to both generate clinically relevant insights that may not be possible with narrower testing approaches, and contribute high-quality molecular information back to providers and to our database. We offer large-panel solid tumor and hematologic testing through multiple assays, with our core clinical assay (xT and xR) offering large panel DNA, RNA full transcriptome, and incidental germline findings through normal blood or saliva analyses. Our current offerings also include liquid biopsy (xF), whole exome (xE), and hereditary cancer risk (xG). We are also currently validating a minimal residual disease assay. Our oncology tests are differentiated not only because of their breadth, but also because in many cases they are connected to clinical data, which allows us to account for the drugs the patient took historically, how they responded, and for which clinical trials they are actually eligible. We endeavor to not recommend drugs for which a patient has been previously prescribed in a prior line of therapy and failed, and not recommend clinical trials they are not eligible to participate in, based on the inclusion or exclusion criteria of the trial. The following table lists our current oncology test offerings:

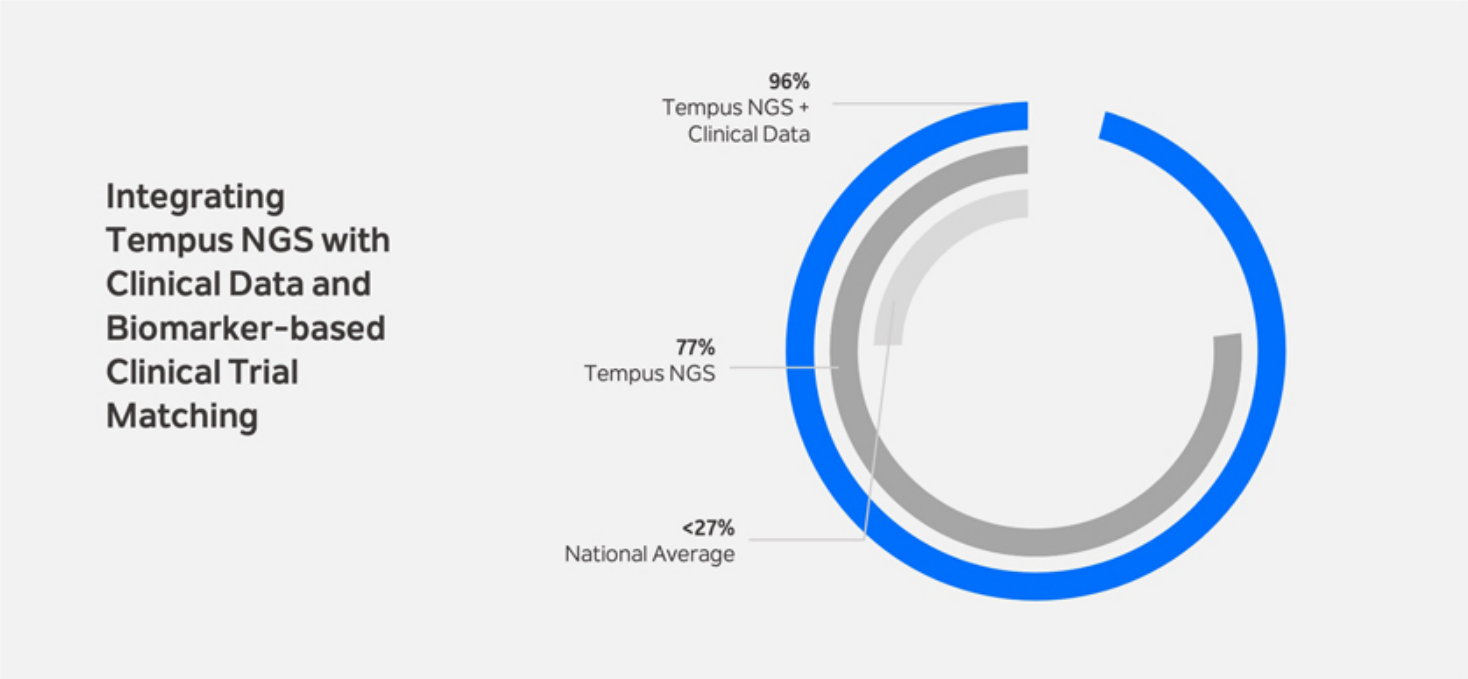
Lab Tests	Launch Year	Description
Oncology tests		
Tempus|xT	2017	• Designed to detect actionable oncologic targets by sequencing tumor tissue samples • Typically associated with incidental germline testing for matched normal saliva or blood samples, when available • Fourth generation test that covers 648 genes at 500x coverage spanning approximately 3.6 Mb of genomic space • Includes full TCR, BCR, and HLA typing for immuno-oncology, or IO, signatures • Detects TMB, MSI, and fusions • The test has an approximately 10-day quoted turnaround time. • In our analytical validation, we demonstrated sensitivities >98% for SNVs, >92% for rearrangements / fusions, >92% for CNVs and indels, and 99.9% for MSI. • Premarket approval (PMA) obtained from the FDA in April 2023
Tempus|xE	2018	• A whole exome cancer assay designed to identify actionable oncologic variants as well as neoantigens across the exome from tissue samples, thus enabling IO applications • Run at 500x coverage for approximately 650 of the most significant onco-driving mutations and 250x depth of coverage for more than 19,000 genes on the panel • Detects TMB, MSI, and fusions

Lab Tests	Launch Year	Description
Tempus|xF	2018	• Next-generation liquid biopsy assay covering 105 genes at approximately 20,000x coverage from peripheral blood samples for solid tumors • Typically used for oncogenic and resistance mutations that can be detected in cell free DNA, or cfDNA, from a peripheral blood draw • In our analytical validation, for 0.5% VAF and 30ng of DNA, we demonstrated >99.9% sensitivity for SNVs, 98.8% for indels, >99.9% for CNVs, and 97.4% for rearrangements and fusions. xF also demonstrated 100% sensitivity concordance with Roche AVENIO ctDNA Expanded Kit for indels, CNVs, and rearrangements. We also demonstrated >99.9% specificity for SNVs, indels, and fusions, and 96.2% specificity for CNVs • The xF+ version is a 523 gene panel that includes bTMB, MSI, additional fusions and CNVs
Tempus|xG	2021	• 52 gene inherited cancer germline panel run off whole exome platform at 75x depth of coverage • Tests hereditary predisposition across common and well-described cancer syndromes such as breast, ovarian, prostate cancer (*BRCA1, BRCA2*), pancreatic cancer (*CDKN2A, PALB2*), colorectal cancer (*APC, BMPR1A*), and Lynch Syndrome (*MLH1, MSH2, MSH6, PMS2, EPCAM*) • Typically used in patients with a personal and / or family history suggestive of hereditary predisposition to cancer and can guide future diagnostic decisions • The xG+ version is an 88 gene panel covering genes associated with both common and rare hereditary cancers
Tempus|xR	2023	• Full transcriptomic profiling assay for solid tumors and hematologic malignancies at 50 million paired end reads, offered as a separate test as of January 2023 (previous paired with xT and xE) • Reports clinically relevant fusions for more than 100 targeted genes, as well as altered splicing events for MET exon 14 and EGFRvIII, in an unbiased and comprehensive manner • 43.4% of patients were matched to a targeted therapy when DNA seq, RNA seq, and immune biomarker assessment were combined, compared to 29.6% of patients who had a therapy match using DNA seq alone

Lab Tests	Launch Year	Description
		• Among patients with identified fusions, 29% more patients were identified with a unique clinically actionable fusion that could be matched to a targeted therapy when RNA seq was incorporated, compared to DNA seq alone • The test has an approximately 10-day quoted turnaround time

We are also currently validating xM, a joint methylation signature and variant workflow for minimal residual disease detection.

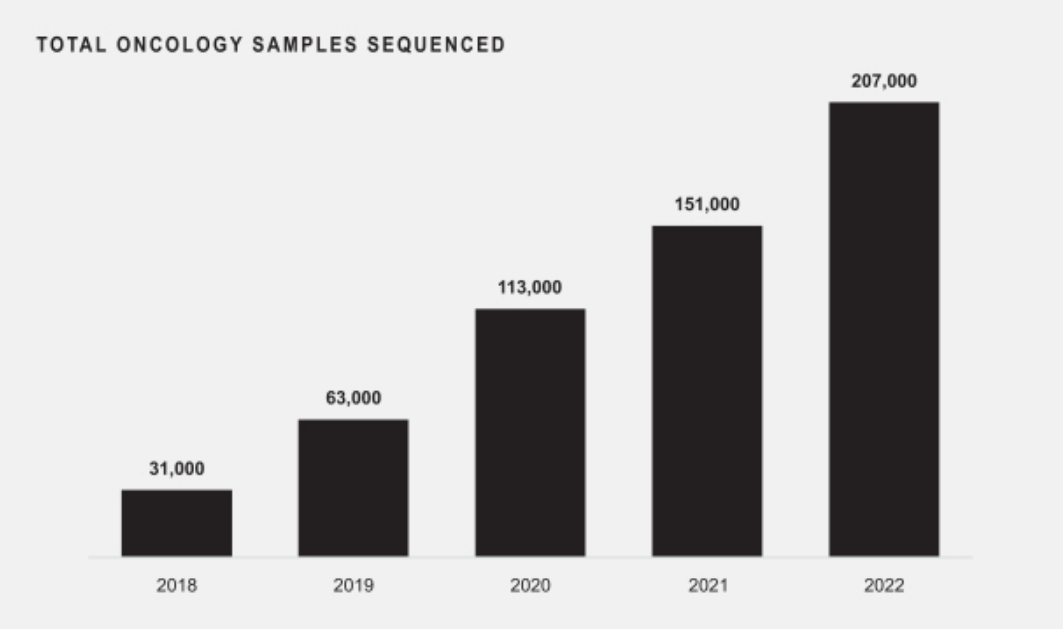
We believe incorporating clinical data in our diagnostic tests has widespread benefits. For example, combining clinical and molecular data resulted in improved therapy matching for patients in a study that we conducted, the results of which were published in Nature Bio in September 2019. In that study, using our sequencing results and matched clinical data from 500 patient samples across a range of tumor types, we observed that 96% of patients could be matched to at least one clinical trial. Approximately 77% of patients were matched to at least one clinical trial based on a gene variant. Of the patients who were not matched to a biomarker-based clinical trial, 19.4% were matched to at least one disease-based clinical trial from clinical data alone.



The results of the Nature Bio study indicated that paired tumor-normal DNA-seq and RNA profiling of patient cancer biopsies yielded high match rates to targeted therapies and clinical trials, and also underscored the value of integrating and contextualizing clinical and molecular data to provide physicians with distilled information regarding their patients' disease and potentially actionable characteristics. In sum, our Platform demonstrated an ability to help maximize personalized therapeutic options for a broader proportion of patients with cancer, which typically cannot be attained through smaller tumor-only DNA-seq panels.

In addition, in a paper we published in Nature Precision Oncology in July 2021, we highlighted the benefits of performing both solid tumor and liquid biopsy profiling. We observed that the concordance of the results of tissue sequencing and liquid testing, even when concurrently profiled, was approximately 70% at most, with both liquid testing and tissue sequencing missing a selected number of potentially actionable mutations. Yet when both are performed, as Tempus often does, the coverage of potentially actionable mutations increases.

We believe the market is recognizing the value of our products and their benefits, as they relate to sequencing both somatic and germline variants, running both solid tumor and liquid biopsies, broadly sequencing RNA in addition to DNA, making available raw files and structured clinical data, and matching the results to clinical data for the patient sequenced. As a result, our clinical volume in oncology rose from approximately 31,000 samples sequenced in 2018 to approximately 207,000 samples in 2022.



Our Neuropsychology Tests

We entered neuropsychology in 2019. We currently offer our proprietary nP assay for pharmacogenomic testing for patients with psychiatric conditions, such as depression, general anxiety disorder, bipolar disorder, and other relevant diagnoses. Despite the growing prevalence of depression and anxiety, their treatment remains largely the same as it has been for decades. Today, there are dozens of antidepressants that are often prescribed based on trial and error, where psychiatrists alter the dose and class of medications when one fails to work. The difficulties in prescribing medications leads many patients to take the wrong medications, in the wrong dose. Emerging evidence demonstrates that there are molecular mechanisms that suggest one drug, or class of drugs, may work better than another based on the genetic profile of the patient, and our assay is designed to elucidate these differences. The following table describes our nP assay.

Neuropsychology Test		
Tempus|nP	2019	• Pharmacogenomic profiling for patients with psychiatric conditions; primarily used for depression • Covers 13 validated genes with known roles in pharmacokinetics, pharmacodynamics, and immune response to FDA approved medications that may be prescribed in the neuropsychiatric space • Uses matrix-assisted laser desorption ionization-time of flight (MALDI-TOF) mass spectrometry to analyze 80 single nucleotide and small insertion-deletion (indel) variants in the 13 genes. Concurrently, DNA fragment analysis is used to analyze copy number variants in CYP2D6 and a large indel in the SLC6A4 promoter

In an effort to bring AI to this field, we are not only performing pharmacogenomic profiling, we also regularly collect two additional data modalities: (i) time on therapy data from the patient's EHR (or directly from the ordering physician), and (ii) patient reported outcome, or PRO, data through our TempusPRO mobile application.

TempusPRO is our patient-facing mobile application that collects PRO measurements on a longitudinal basis. We are also capturing passive lifestyle measurements through mobile sensory devices, such as daily steps and minutes spent exercising. These measurements serve as a quantitative, unbiased backbone to the more qualitative and subjective measures that are commonplace in psychiatry. As we continue to advance the field of psychiatric medicine, we believe our Platform is well suited to extend to additional neurological conditions beyond depression, anxiety, and bipolar disorder.

Our Infectious Disease Tests

We expanded into infectious diseases in 2020 due to the onset of the COVID-19 pandemic and launched PCR and NGS tests to detect the rapidly spreading virus. Our laboratory testing infrastructure and our relationships with a broad customer base enabled us to rapidly scale operations and deliver approximately 2.8 million COVID-19 clinical tests through March 31, 2023, after which we stopped offering such tests. We entered into clinical testing agreements with various clients, including pharmacies, urgent care centers, state departments of health, primary care providers, universities and schools, and corporate clients.

As COVID-19 testing has materially decreased in the United States in light of the broadly distributed vaccines and changes in CDC guidance as to whom should be tested, we have shifted resources away from COVID-19 testing and stopped offering COVID-19 PCR diagnostic tests in the first quarter of 2023. As such, we are focusing our efforts on other infectious diseases areas and on broader respiratory pathogen testing.

Data and Services

Our Data and Services product line facilitates drug discovery and development for pharmaceutical and biotechnology companies through two primary products: Insights and Trials. We also maintain a growing tumor-derived biological modeling (or organoid) laboratory, which allows us to provide modeling and screening services to our pharmaceutical and biotech clients.

One way we measure our data business is based on the remaining total contract value (the "Remaining TCV") that is contractually committed to be delivered in the future. As of September 30, 2023, we have signed

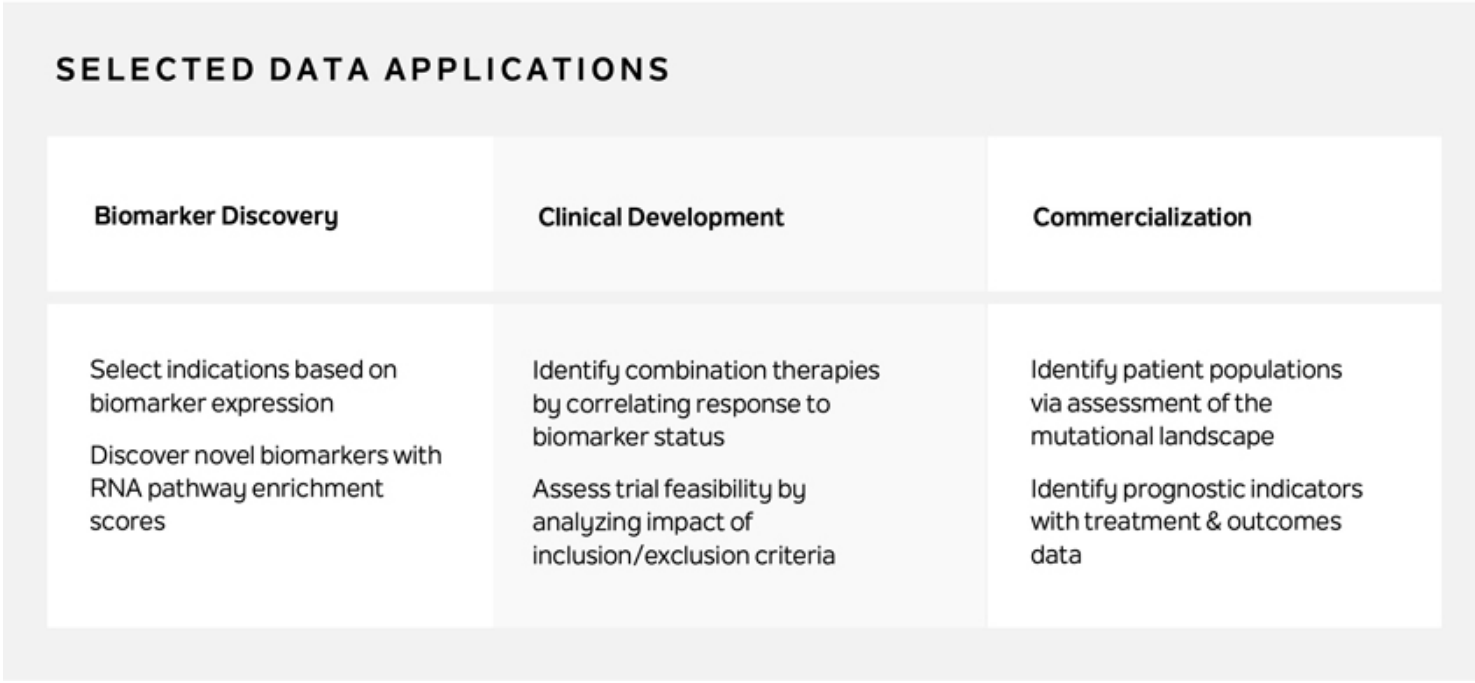
contracts with a Remaining TCV of more than $785.0 million, which includes approximately $300.0 million in additional potential future contractual opt-ins. Remaining TCV is equal to the total potential value of signed contracts and assumes the exercise of all contract options, all discretionary opt-ins, and no early termination. Remaining TCV includes the total potential value of the company's strategic collaborations with AstraZeneca and GlaxoSmithKline, which, although listed under the Data and Services product line, could be satisfied by the purchase of any of the company's products and services. Remaining TCV excludes any revenue recognized to date on these contracts or any future adjustments made to the contractual value as a result of amendments or terminations. Our agreements contain termination clauses, including the ability of our counterparty to terminate for convenience, and there can be no guarantee that contracts will not be terminated, that contractual options and discretionary opt-ins will be exercised, or that we will achieve the full amount of potential revenue represented by these contracts. Remaining TCV is not a calculation of revenue and should be viewed independently of revenue and deferred revenue, as Remaining TCV is not intended to be combined with or replace these items. Similarly, Remaining TCV is not a forecast of future revenue, which can be impacted by, among other things, contract start and end dates, our ability to meet performance obligations, and the exercise of contractual options or termination rights. Moreover, Remaining TCV may differ from similarly titled metrics presented by other companies and may not be comparable to such other metrics.

Insights

Historically, the primary means for pharmaceutical and biotechnology companies to build a dataset for drug discovery and development was to run a preclinical study or clinical trial, and to leverage limited datasets such as medical claims data. We believe Tempus is changing the existing paradigm. We launched our Insights product to allow researchers to access large amounts of multimodal healthcare data that historically did not exist at scale in a single consolidated database. We have amassed a large connected dataset, which we organize in near real time across multiple modalities and multiple disease areas, allowing us to work with pharmaceutical and biotechnology companies broadly, from early-state research and development through commercialization.

For our Insights offering, we license libraries of linked, de-identified clinical, molecular, and imaging data, and provide a suite of analytic and cloud-and-compute tools for discovery, research, development, and other commercial purposes. Our primary customers are pharmaceutical and biotechnology companies. These customers either pay us on a per file basis or through multi-year data licensing agreements to use our de-identified patient database. We currently work with 19 of the 20 largest public pharmaceutical companies based on 2022 revenue.

We believe we offer a unique value proposition to the industry as a cost-effective source of high-quality and comprehensive data on targeted patient populations. Our data is useful across the oncology drug development value chain, and our biotechnology and pharmaceutical customers are using the data to inform decisions in a variety of discovery and development applications, selected below. One metric that illustrates the utility of our data to our customers is "Net Revenue Retention." Net Revenue Retention compares the annual Insights product revenue generated from all customers that made an Insights purchase in one year to the annual Insights product revenue generated from the same cohort of customers in the subsequent year. Net Revenue Retention is not a calculation of revenue and should be viewed independently of revenue and deferred revenue, as Net Revenue Retention is not intended to be combined with or replace these items. Similarly, Net Revenue Retention is not a forecast of future revenue. Moreover, Net Revenue Retention may differ from similarly titled metrics presented by other companies and may not be comparable to such other metrics. For the year ended December 31, 2022, Net Revenue Retention was approximately 130% compared to the same cohort of customers for the period ended December 31, 2021.



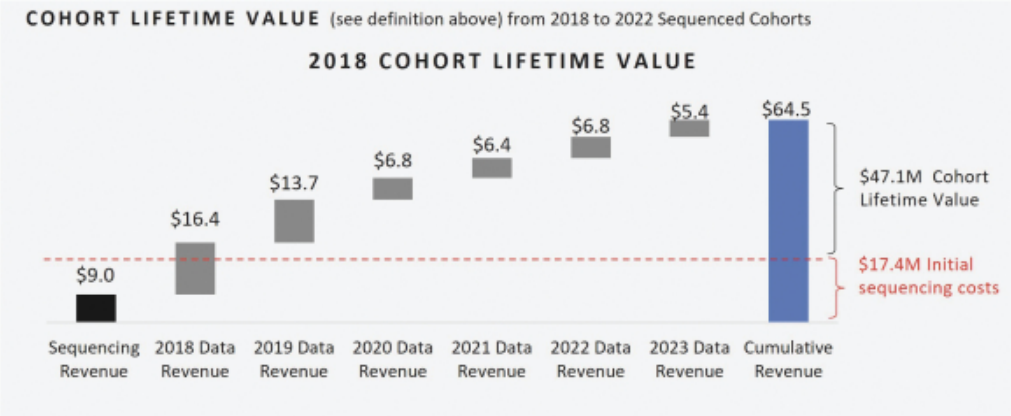
To illustrate an example of how our data can be applied, in December 2020, we published a peer-reviewed study in ScienceDirect in which we analyzed longitudinal real-world data, or RWD, from a large cohort of patients with breast cancer (n = 4,000) to test whether results were consistent with previous clinical studies and to demonstrate the real-world evidence validity of our database. We also evaluated whole-transcriptome sequencing as a complementary diagnostic tool (n = 400). The conclusions of the study demonstrated that our database mirrored the overall population of patients with breast cancer in the United States, and that near real-time, RWD analyses are feasible in a large, highly heterogeneous database. Furthermore, the study demonstrated that molecular data may aid deficiencies and discrepancies observed from breast cancer clinical RWD.

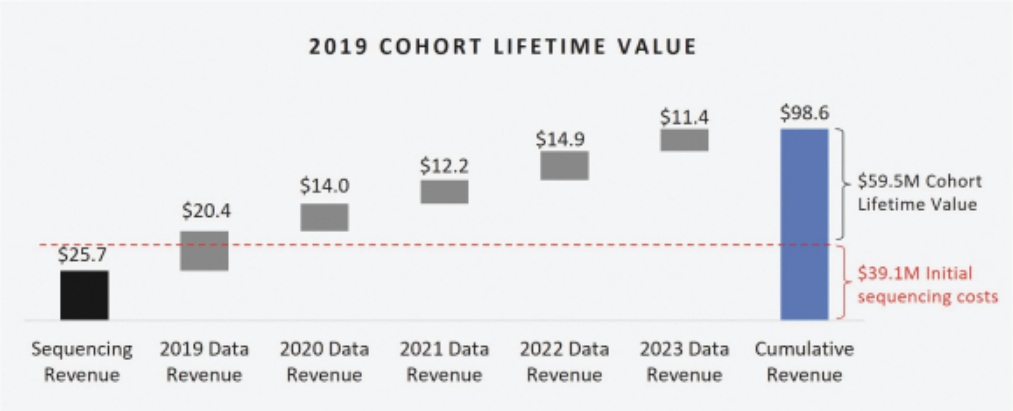
Because many of our data profiles regularly update with clinical outcome and response data over time, the utility of a single de-identified record may increase over time. As such, the files we generate by sequencing a patient, when connected to clinical data, are valuable to pharmaceutical and biotechnology companies, as they not only allow users to gain molecular insight into what is happening among cohorts of patients, but they also allow users to track those cohorts over time. As a result, our files behave as if they have a "lifetime value" that has the potential to increase over time, in a manner similar to a content company where you pay to create content and then monetize the content over time as people subscribe to access the content.

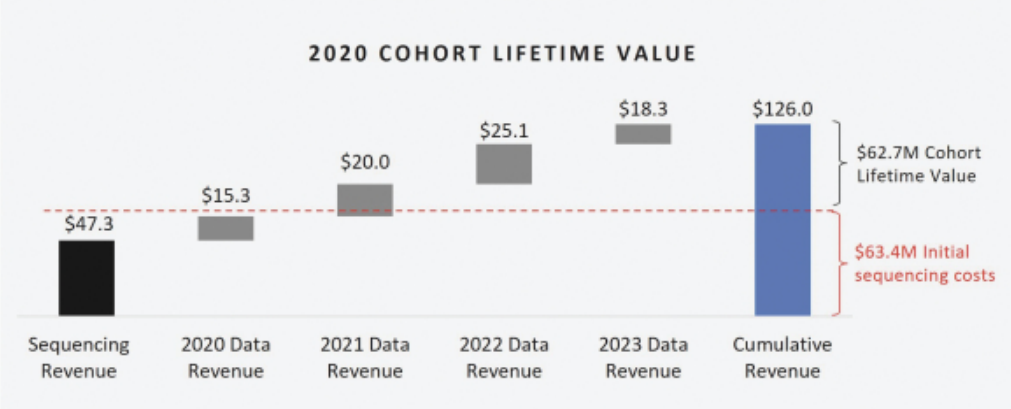
To illustrate one of the ways that our business model differs from traditional diagnostic companies, we present below the "Cohort Lifetime Value" derived from records in our de-identified dataset based on the year of data generation. We define "Cohort Lifetime Value" as the cumulative revenue attributable to a specific cohort of de-identified records, including revenue derived both from the initial sequencing (Genomics) and licensing and related services (Data and services), less the initial sequencing costs incurred to generate the data ultimately licensed. Sequencing revenue is a component of genomics revenue in our Consolidated Statement of Operations and differs from total genomics revenue due to other components, including COVID-19 PCR testing and other lab services unrelated to our data business. Data revenue is a component of data and services revenue and represents the revenues recognized in each period attributable to each cohort. Initial sequencing costs are a component of cost of revenue, genomics in our Consolidated Statement of Operations and include laboratory personnel compensation and benefits, as well as the cost of laboratory supplies and consumables, depreciation of laboratory equipment, shipping costs, and certain allocated overhead expenses. Total initial sequencing costs differ from total cost of revenues, genomics due to other components, including costs associated with COVID-19 PCR testing and other lab services unrelated to our data business. Notably, "Cohort Lifetime Value" also does not include costs reported as cost of revenues, data and services in the Consolidated Statement of Operations. Cost of revenues, data and services were $11.9 million and $40.2 million for the years ended December 31, 2021 and 2022, respectively. These costs represent 19.2% and 32.8% of data and services revenue for the years ended December 31, 2021 and 2022, respectively.

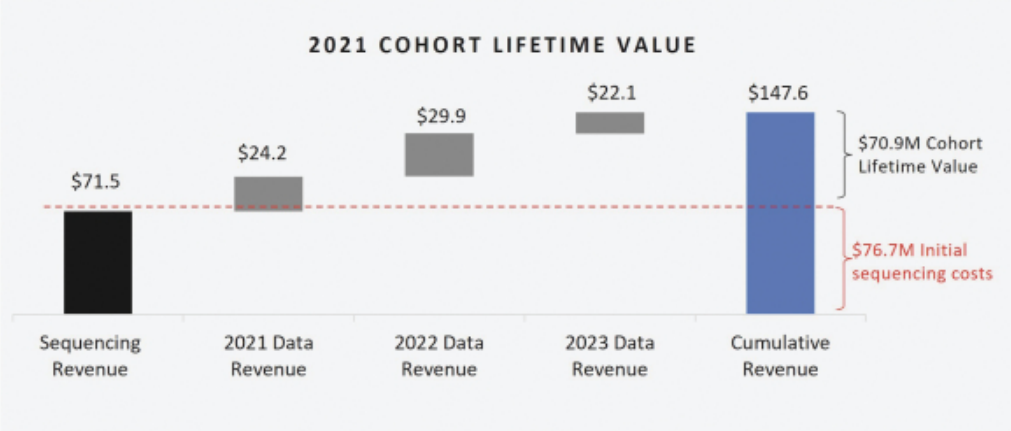
In 2018, the first full year that we operated a laboratory, we sequenced samples from approximately 7,500 patients. From that 2018 cohort of sequenced patients, through September 30, 2023, we generated $64.5 million of combined revenue from sequencing, data licensing of de-identified data derived from those records, analytical services, and clinical trials matching, which is approximately 7.2 times the revenue we received from sequencing of that cohort in the initial year. The total cost to sequence the 2018 cohort was $17.4 million, of which $9.0 million was covered by reimbursement for the corresponding sequencing tests. We then generated $16.4 million of data revenue from that cohort in 2018, finishing the year with a "Cohort Lifetime Value" of $8.0 million. As more customers licensed de-identified records from the 2018 cohort in subsequent years, we generated additional revenue in 2019, 2020, 2021 and 2022 from the 2018 cohort, and as of September 30, 2023, the 2018 "Cohort Lifetime Value" was $47.1 million. We experienced similar trends for the 2019, 2020, 2021, and 2022 cohorts. As of September 30, 2023, the 2019 "Cohort Lifetime Value" was $59.5 million, the 2020 "Cohort Lifetime Value" was $62.7 million, the 2021 "Cohort Lifetime Value" was $70.9 million, and the 2022 "Cohort Lifetime Value" was $75.4 million in its first year of existence.

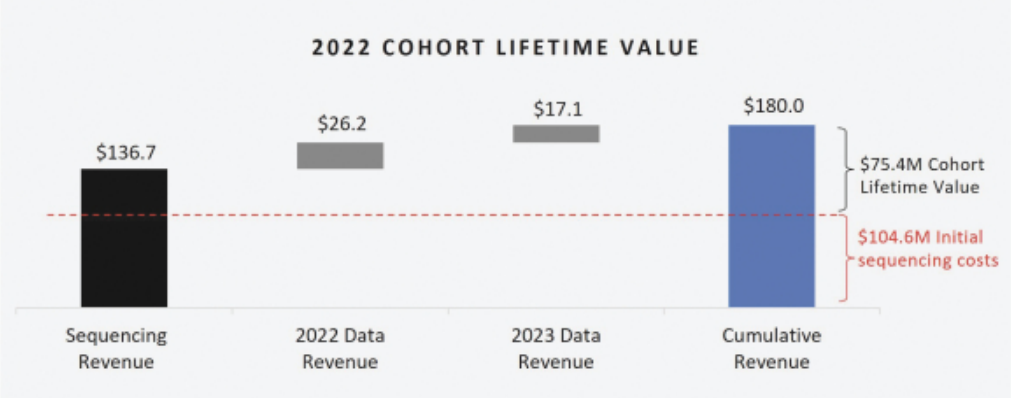
"Cohort Lifetime Value" for the 2018 to 2022 data cohorts is illustrated in the graphs below. Figures shown in "2023 Data Revenue" represent revenue through September 30, 2023.






2020 COHORT LIFETIME VALUE
$47.3
$15.3
$20.0
$25.1
$18.3
$126.0
$62.7M Cohort Lifetime Value
$63.4M Initial sequencing costs
Sequencing Revenue
2020 Data Revenue
2021 Data Revenue
2022 Data Revenue
2023 Data Revenue
Cumulative Revenue


2021 COHORT LIFETIME VALUE
$71.5
$24.2
$29.9
$22.1
$147.6
$70.9M Cohort Lifetime Value
$76.7M Initial sequencing costs
Sequencing Revenue
2021 Data Revenue
2022 Data Revenue
2023 Data Revenue
Cumulative Revenue

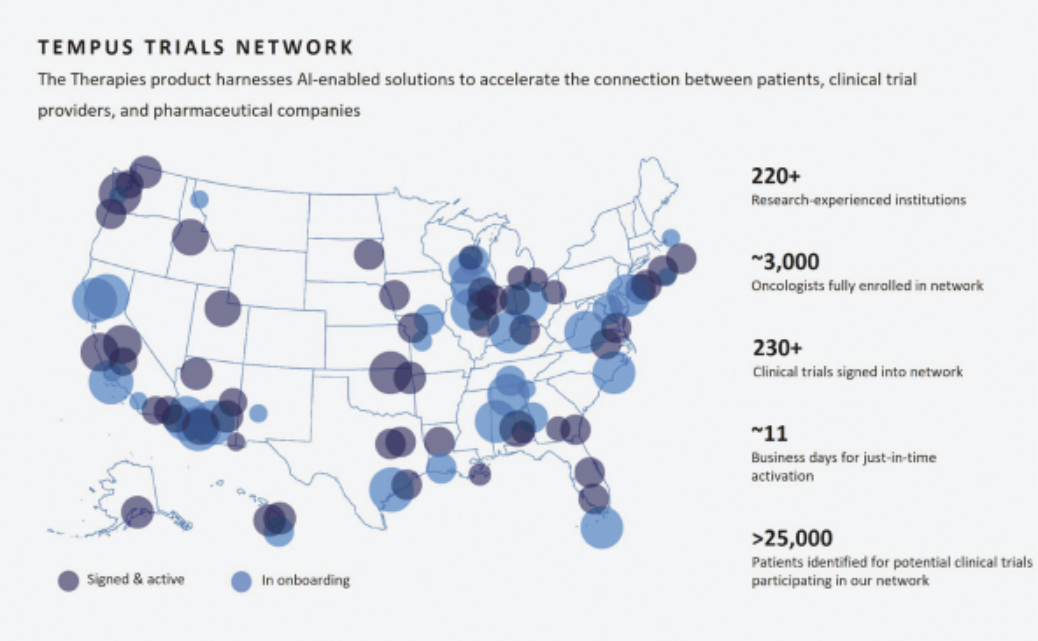

2022 COHORT LIFETIME VALUE
$136.7
$26.2
$17.1
$180.0
$75.4M Cohort Lifetime Value
$104.6M Initial sequencing costs
Sequencing Revenue
2022 Data Revenue
2023 Data Revenue
Cumulative Revenue

Trials

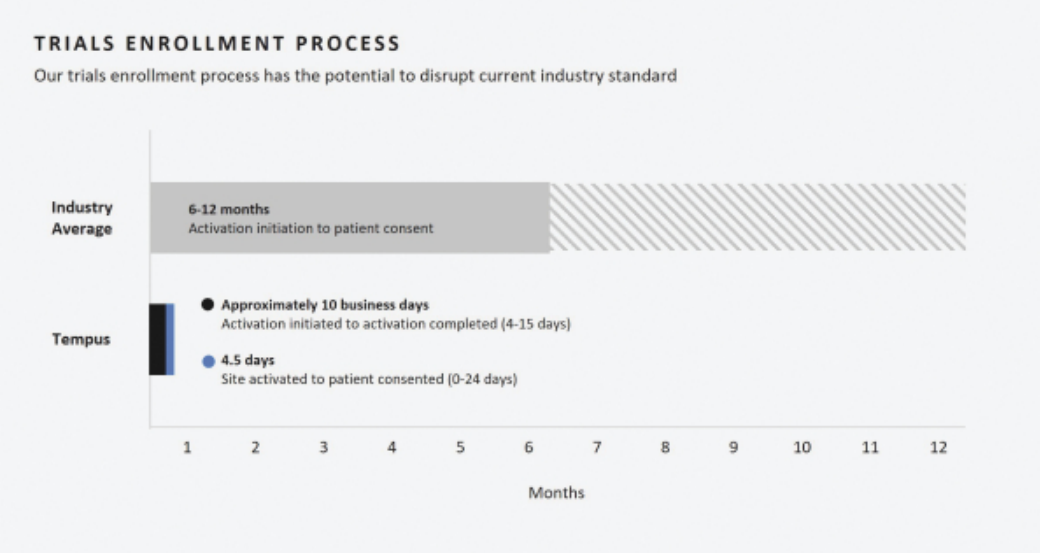
Trials is our second offering within our Data and Services product line and leverages our broad network of oncologists to provide clinical trial matching services for pharmaceutical companies trying to reach hard-to-find and underserved patient populations. Our clinical trial matching product is built on top of our near real-time data feeds and harnesses AI to accelerate the connection between patients, clinical trial providers, and clinical trial sponsors. We empower both oncologists to help patients find clinical trials and pharmaceutical companies to populate their trials. We generate revenue from both matching a patient to the trial (through notices we send to physicians alerting them of potential trials that are a fit for their patients), and from the patient actually enrolling in the trial.

Our Trials product is a bold initiative that we do not believe has been implemented at scale in the United States by any other organization. We are endeavoring to create a just-in-time network across a wide variety of academic medical centers and community providers, that can support hundreds or even thousands of trials, in which the administrative and logistical foundation is uniform across the entire network. This network allows us to identify a patient that is a match for a targeted trial and get that patient enrolled within days, even if the trial was not previously open at the hospital (assuming consent of the trial sponsor), anywhere in the United States. Prior to Tempus, we believe it would have been virtually impossible to even attempt to build this type of just-in-time program across oncology, as the required ingredients for success are unique to our Platform, namely: (i) a large genomic sequencing business that is widely adopted and allows for the identification of patients that are molecular matches to trials; (ii) the ability to structure clinical data for those patients in near real time to filter for inclusion and exclusion criteria; (iii) direct pipelines allowing data to be transferred to and from the laboratory and provider; and (iv) an analytic engine able to stratify patients and follow each unique patient journey ensuring that patients actually enroll in the studies.

Our clinical trial matching offering is called the TIME Trial® program, which we launched in June of 2019. Since its introduction, this program has gained significant traction and as of September 30, 2023, more than 220 provider networks and research institutions have signed up to join the program. As of September 30, 2023, more than 3,000 oncologists were fully enrolled, more than 220 clinical trials were signed into the network, and more than 25,000 patients were identified for potential enrollment into clinical trials in our network.



One of the primary benefits of our Trials product is our ability to facilitate the initiation of a clinical trial in a new location in a short amount of time. Third-party research suggests that it takes 6-12 months, on average, to initiate a new trial site for an ongoing clinical trial in the United States. We have been able to substantially streamline this process by leveraging technology and introducing a standard methodology, with activation of new sites through our Trials product taking approximately 10 days on average in 2022. A comparison of our average time from site initiation to patient consent with the industry average is below:



In addition to TIME, we provide other clinical trial services and conduct our own studies as part of our Trials program, all with a goal of identifying new therapies and bringing them to market more efficiently. In January 2022, we acquired Highline Consulting, LLC, a contract research organization (CRO), which we subsequently renamed Tempus Compass. Tempus Compass manages and executes early and late-stage clinical trials, primarily in oncology. We also partner with life sciences companies to sponsor studies of drugs, devices, and diagnostics, integrating our life science solutions to help bring new drugs to market faster. Each of the products and services within our Trials program complement each other to create a suite of integrated solutions for life sciences companies from early discovery to commercialization.

Tumor Derived Biological Modeling—Organoids

In addition to our efforts to collect vast amounts of phenotypic, morphologic, and molecular data, we have built a large, biological modeling lab that allows us to test various theories in vitro through our large repository of tumor-derived Organoids, and to perform drug screening for our various life sciences clients. Many of our Organoids are fully characterized and sequenced using our NGS panels, providing genomic and transcriptomic data for our models, allowing us to explore various hypotheses that enhance our data. Examples of hypotheses we are able to test in our Organoid lab include: (i) which therapeutics are most effective; (ii) differential levels of drug response by tumor type, genomic profile, or other targeted attributes; (iii) discovery of RNA signatures; (iv) attributes of responders and non-responders; and (v) response rates in therapy-resistant models. We work with numerous collaborators including biotechnology companies, pharmaceutical companies, academic institutions, and government labs. Since 2017, we have scaled our sample collection efforts and have received over 3,900 tumor samples to date.

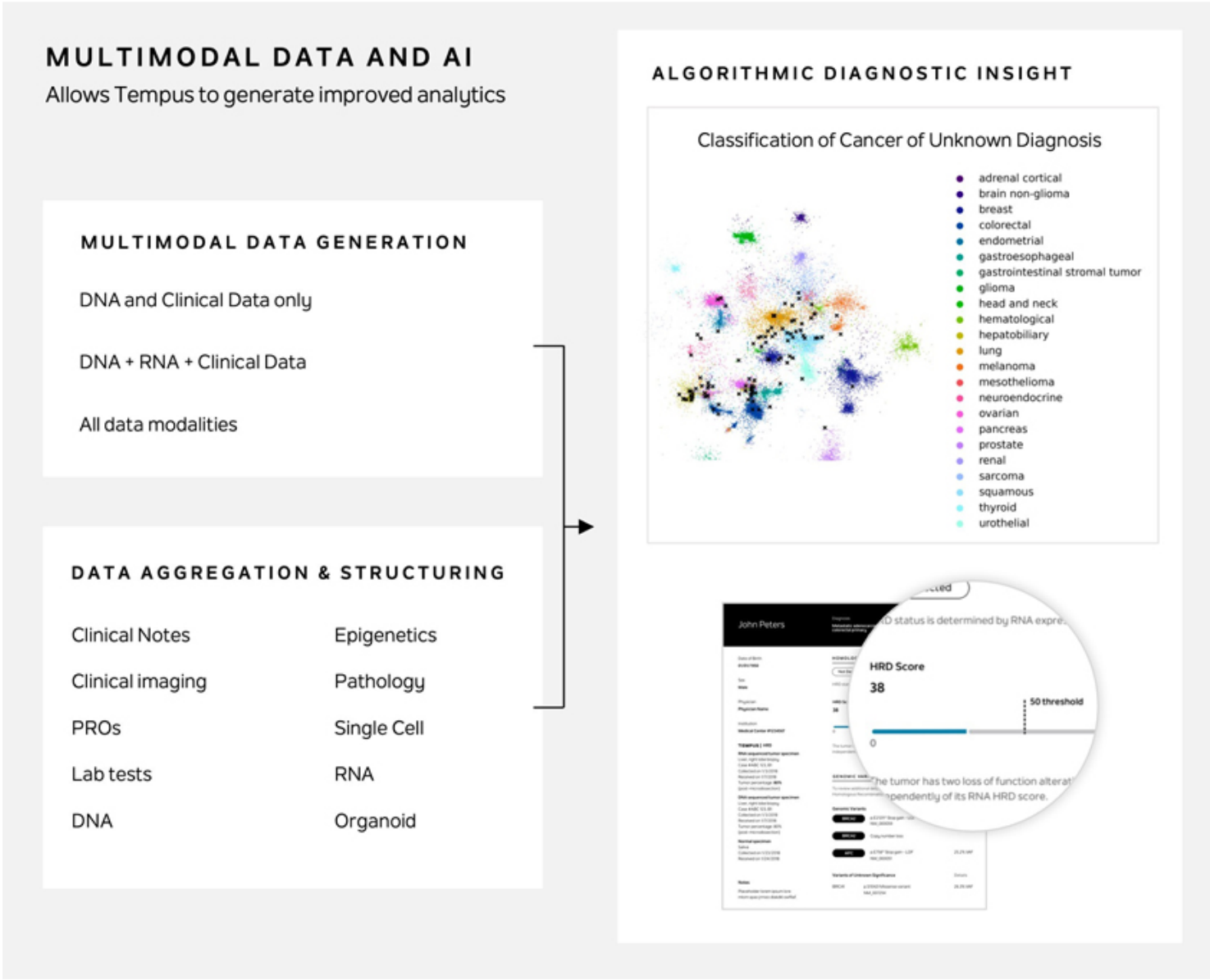
These samples cover a wide range of cancer subtypes, allowing us to work on comprehensive drug screening applications across multiple epithelial based tumor types, such as breast, lung, colorectal, and pancreatic. One of the goals of this screening is to predict a series of therapeutic responses in our Organoids and then test whether or not patients are experiencing similar responses in the clinical setting.

We view biological models as another form of data. Our efforts to grow Organoids are part of our overall strategy to leverage the best of systems biology along with the best of AI to collect the requisite data needed to produce answers broadly throughout healthcare.

AI Applications

The vastness of our dataset, along with our connected platform, creates an opportunity to use data to algorithmically diagnose and treat patients. Our third product line, AI Applications, is focused on developing and providing diagnostics that are algorithmic in nature, implementing new software as a medical device, and building and deploying clinical decision support tools. The primary product of AI Applications is currently "Next," an AI platform that leverages machine learning to apply an "intelligent layer" onto routinely generated data to proactively identify and minimize care gaps for oncology and cardiology patients. As this product gains adoption, we intend to leverage large language models, generative AI algorithms, and our vast database of de-identified data to develop algorithmic diagnostics designed to identify these patients earlier in their disease progression, when treatments are most effective. For example, algorithmic diagnostics that integrate multimodal data can be used to create a more accurate risk profile for patients, leading to improved outcomes and reduced cost. Our repository of multimodal data allows us to find associations and patterns that are largely invisible through a single data modality, but readily apparent when combined. In addition, we find the strength of our analytic models, and our ability to deploy them clinically, improves as we add additional datasets.

The example diagram below represents how algorithm-based diagnostics work and the value of multimodal data as it relates to improved analytics:



Algorithm-based diagnostics are already being used in healthcare, but are not widespread. For example, algorithms exist today that leverage EHR data and lab results to predict early onset of hospital-borne infections, but these tools are still in the very early stages of adoption and validation. While Algos today represent only a small proportion of the diagnostics market, we expect their adoption to grow substantially in the future. We believe Algos represent a significant long-term opportunity that may be substantially larger than our other existing product lines. We believe our ability to launch Algos at scale is a key differentiator of our Platform.

Our Oncology Algos Portfolio

We believe our robust, multimodal dataset creates an opportunity for Algos that otherwise would not be possible and allows us to build AI models at scale, clinically validate them, and deploy the resulting Algos into clinical practice. We currently offer a suite of Algos in oncology, and more in various stages of development. Most of the Algos we currently offer are part of our xR assay, and we do not bill separately for them. Some Algos will likely yield little to no reimbursement until their clinical utility is established or will be ordered separately with our existing NGS assays or diagnostics to enhance the actionable information for physicians, and some may obtain reimbursement at prevailing rates for comparable tests.

Algo	Launch Year	Description
Oncology		
Tumor Origin ("TO") Test	2021	• Predicts the site of origin for cancer patients whose primary tumor site is unknown using tumor RNA expression results • Intended use of the TO test is for cancers of unknown primary, or CUPs, and may help clinicians make more informed decisions where other clinical information like imaging and immunohistochemistry results do not provide a definitive diagnosis • Uses information from analysis of nucleic acids by NGS performed as part of a separately ordered genomic or transcriptomic test • Built using a large internal database of more than 20,000 annotated tumors with transcriptomic molecular data. By comparing the molecular profile (transcriptome) of the patient's cancer with profiles of other cancers in our database, we can help pinpoint the origin of the patient's cancer, potentially helping to inform the course of therapy • For the year ended December 31, 2022, ordered on approximately 10% of our solid tumor profiles
Homologous Recombination Deficiency ("HRD") Test	2020	• A DNA-based algorithmic test that helps identify if a patient has HRD, providing a comprehensive view into a patient's ability to repair double-stranded DNA breaks • HRD status can be used to identify patients who may be sensitive to PARP inhibitors and/or platinum-based chemotherapy • Takes into account results from our solid tumor profiling, giving a full view into commonly mutated genes in the HR-pathway, along with a genome wide l LOH score, giving a clinician a complete view of HRD status • Can be ordered across all major cancer subtypes and does not require additional tissue from the patient • Currently incorporating RNA into a second version of the algorithm, which is intended to improve prediction

Algo	Launch Year	Description
Dihydropyrimidine Dehydrogenase Deficiency ("DPYD") Test	2021	• Identifies certain alterations in the *DPYD* gene, which may be associated with a patient's potential toxicity to 5-FU/Capecitabine chemotherapy based on the associated drug labeling and guidelines from the Clinical Pharmacogenomics Implementation Consortium, or CPIC. • Provides insight into the potential likelihood of a patient developing severe or even fatal toxicity of 5-FU/Capecitabine chemotherapy by covering five SNVs in *DPYD* genes, providing a more complete patient profile. According to CPIC, 5-7% of patients test positive for DPYD deficiency and should be considered for monitoring or dose reduction. • This algorithm uses sequencing data generated as a part of a separately-ordered Tempus|xT Solid Tumor + Normal test. • Tempus DPYD is available pan-cancer although it is most relevant in colorectal, breast, pancreatic and GI cancer patients who are being considered for treatment with 5-FU/Capecitabine chemotherapy.

Our Cardiology Algos

Heart disease is the leading cause of death in the United States. About 630,000 Americans die from heart disease annually, with 11.7% of American adults diagnosed with heart disease and millions of patients suffering from undiagnosed, life-threatening, yet highly treatable conditions such as AFib, cardiomyopathy, and valvular heart disease, to name a few. Tempus is working on solutions to find, diagnose, and help treat these patients earlier in order to improve patient outcomes, using routinely generated clinical data, such as data from a 12-lead ECG, a widely used and easily acquired medical test that measures the electrical activity of the heart, to screen patients who might be at high risk and help navigate them to the appropriate interventional therapy.

In cardiology, we ingest multimodal data and use over 60 algorithms to identify potential care gaps and continuously monitor patient data to find at-risk patients who may be falling through a care gap unbeknownst to their physician, and automatically notify care teams of any needed follow-up or disease progression. More than 80 hospitals nationwide are currently powered by Tempus Next and more than 35,000 patients are screened per month.

We are also developing a suite of algorithms that assess an individual's risk of undiagnosed disease from an ECG, which are trained using a de-identified subset from approximately 3.5 million ECGs, across more than 700,000 patients, with decades of longitudinal clinical data, including outcome and response data. The FDA granted Tempus breakthrough status for our first ECG software device, which is designed to identify patients at high risk of developing AFib in certain populations (patients 40 years of age and older, without pre-existing or concurrent AFib or atrial flutter, and who are at elevated risk of stroke based on a commonly used clinical stroke risk assessment tool (i.e., CHA_2DS_2-VASc score of ≥ 4)).

Algo	Launch Year	Description
Cardiology		
Atrial Fibrillation Test	2023 (in clinical trial setting)	• We have developed an algorithm designed to predict AFib from a normal ECG for certain populations. • About 3.5% of patients who receive ECGs appear not to have AFib but will develop AFib, acute coronary syndrome, or similar condition within one year. This Algo is designed to predict major cardiac trauma and stroke risk from these normal ECG results. • The Tempus AFib test received FDA breakthrough designation in March 2021 for patients 40 years of age and older, without pre-existing or concurrent AFib or atrial flutter, and who are at elevated risk of stroke based on a commonly used clinical stroke risk assessment tool (i.e., CHA_2DS_2-VASc score of ≥ 4). • We are also advancing Algos that are designed to predict aortic stenosis, and we are working on other disease areas within cardiology, such as low ejection fraction and familial hypercholesterolemia.

We are also advancing Algos that are designed to predict aortic stenosis, and we are working on other disease areas within cardiology, such as low ejection fraction and familial hypercholesterolemia. If broadly deployed, we believe these Algos could have widespread clinical applicability, increase life expectancy, and reduce the total cost of care.

In addition to algorithms based on NGS testing or in the cardiology space, we offer, or are developing, a suite of algorithms derived from radiologic images and digital pathology slides. In October 2022, we acquired Arterys, Inc., a company that provides a platform to derive insights from radiology medical images to improve diagnostic decision-making, efficiency, and productivity across multiple disease areas. We have also developed algorithms based on Immunohistochemistry, or IHC, and H&E staining, which can be used, among other things, to help identify patients who may be eligible for additional treatments or clinical trials.

Customer Case Studies: Aligning the Interests of Key Stakeholders

We designed our Platform to help unlock data from existing silos and facilitate data exchanges across healthcare providers. We believe our technological advancements, deep relationships with providers, and rapid commercial adoption demonstrate the value our Platform creates for the healthcare ecosystem. We benefit from a flywheel effect; the more data we collect, the smarter our tests become, the more applications we launch, the more physicians join our network, further growing our database, making our tests smarter for clinicians and our database more valuable for researchers.

We describe below select case studies that demonstrate the value we deliver to the healthcare ecosystem, with the ultimate goal of helping patients and improving clinical outcomes.

Healthcare Provider and Patient Case Study

Our Platform is designed to help raise the standard of care in precision medicine by enabling physicians to make real time data-driven decisions at the point of care. Physicians use our Intelligent Diagnostics, software solutions, and analytic support tools to bring clinically actionable insights to genetic analysis. We see the power of our Platform both in its widespread adoption and, most importantly, the impact it has on patients.

A 50-year old female patient was diagnosed with metastatic gastric cancer. The average life expectancy for someone with stage IV gastric cancer is less than one year, with approximately 5% of patients surviving for five years. The patient's tumor harbored a mutation in a gene indicating that Epstein-Barr virus, or EBV, was involved in the pathogenesis. The tumor mutational burden was not high, but the tumor EBV made the patient a candidate for immunotherapy. Tempus' NGS tests were used to evaluate the patient's suitability for a cancer vaccine clinical trial, and two distinct aspects of Tempus' tests led the treating physician to pursue new treatment recommendations. First, Tempus sequencing used paired tumor and normal specimens to make more accurate somatic mutation calls. Thus, Tempus' test identified neoantigens that could be targeted by the immune system, while excluding germline variants of unknown significance that the immune system would not recognize as foreign. Second, Tempus used whole transcriptome RNA sequencing data to evaluate whether the neoantigens detected from the patient's DNA were expressed in the cell. Ultimately, after evaluation for the vaccine trial, the treating physician recommended checkpoint inhibitor immunotherapy. While the patient responded well to immunotherapy, eventually side effects caused her to seek other treatment modalities. Additional testing identified a mutation downstream, which was used to match the patient into a clinical trial for an ERK inhibitor. Two other mutations indicating possible response to off-label therapies were also found, and the treating physician would be able to evaluate those therapies in the event of treatment failure.

Pharmaceutical and Biotechnology Customers: Insights Case Study

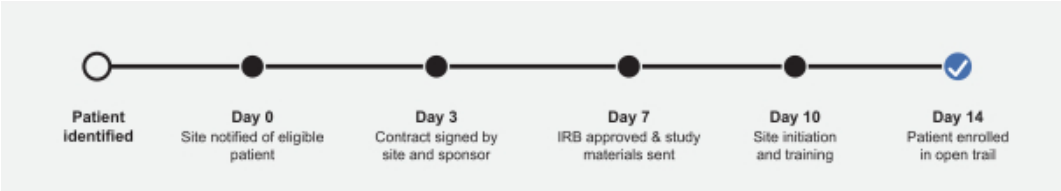
We work with pharmaceutical and biotechnology companies in a number of ways, including (i) licensing de-identified data libraries on a one-time or limited duration basis; (ii) licensing de-identified data as part of a multi-year subscription; (iii) performing sequencing services for clinical trials on a bespoke basis or as part of a companion diagnostic, or CDx, claim; (iv) growing patient derived biological models (Organoids) to allow for high-throughput drug screening; and (v) helping companies identify and enroll patients for their clinical trials. Some companies may leverage one of our products, while our relationships with others are more comprehensive.

Genmab is an example of a pharmaceutical company that has used many of our products and services. We signed a strategic collaboration with Genmab to help identify novel molecular and immune targets in cancer indications of interest. One aspect of the collaboration is a shared interest in developing new treatments for patients with pancreatic cancer. Tempus and Genmab data scientists collaborated to explore multiple indications in an effort to validate biomarkers and accelerate research and development using Tempus' multimodal datasets. We analyzed de-identified data derived from over 2,000 pancreatic cancer patients with comprehensive DNA sequencing, full transcriptomic sequencing, longitudinal EHR data, and digital pathology slides to fuel their discovery efforts. We believe comparable multimodal datasets of this depth and breadth have not previously been assembled for pancreatic cancer. Fueled with a unique and larger dataset, computational biologists and data scientists from both organizations identified for further assessment select subtype-specific surfaceome gene targets that were highly expressed in pancreatic cancer samples but lowly expressed in normal tissue. Ultimately, several hundred potential drug discovery targets were identified and are currently being assessed by Genmab using antibody databases, cell-type analyses, immune infiltration, and biological mechanism pathway analyses. The Genmab collaboration demonstrates how Tempus can work as a partner in the target identification and validation process and highlights the valuable insights that can be garnered using Tempus' data. With the shared goal to bring novel drugs to patients in need, Tempus is entitled to receive milestone and royalty payments for programs that advance through clinical development under this collaboration.

Pharmaceutical and Biotechnology Customers: Trials Case Study

We have created a dynamic marketplace for biopharmaceutical companies to leverage our data to identify eligible patients and activate appropriate sites to increase access to molecularly targeted clinical trials. We believe our offering is well suited for identifying patients for targeted trials. To detect specific mutations that may be the subject of a clinical trial, we offer solid tumor and liquid biopsy NGS panels that are able to detect specific molecular markers; however, we can also match patients tested through other sequencing companies via our direct EHR or clinical database integrations.

When we identify a patient who meets the criteria of a participating clinical trial at one of our TIME Trial® program sites, we inform the patient's treating physician of the trial and if the trial sponsor consents, we can rapidly activate the trial locally on-site. We have been able to substantially streamline the site activation process by leveraging technology and introducing a standard methodology, with Just-in-TIME activations taking approximately 10 days on average in 2022.



The TIME Trial® program has national coverage, including numerous underserved community oncology clinics, allowing us to reach cancer patients who previously did not have access to investigational therapies.

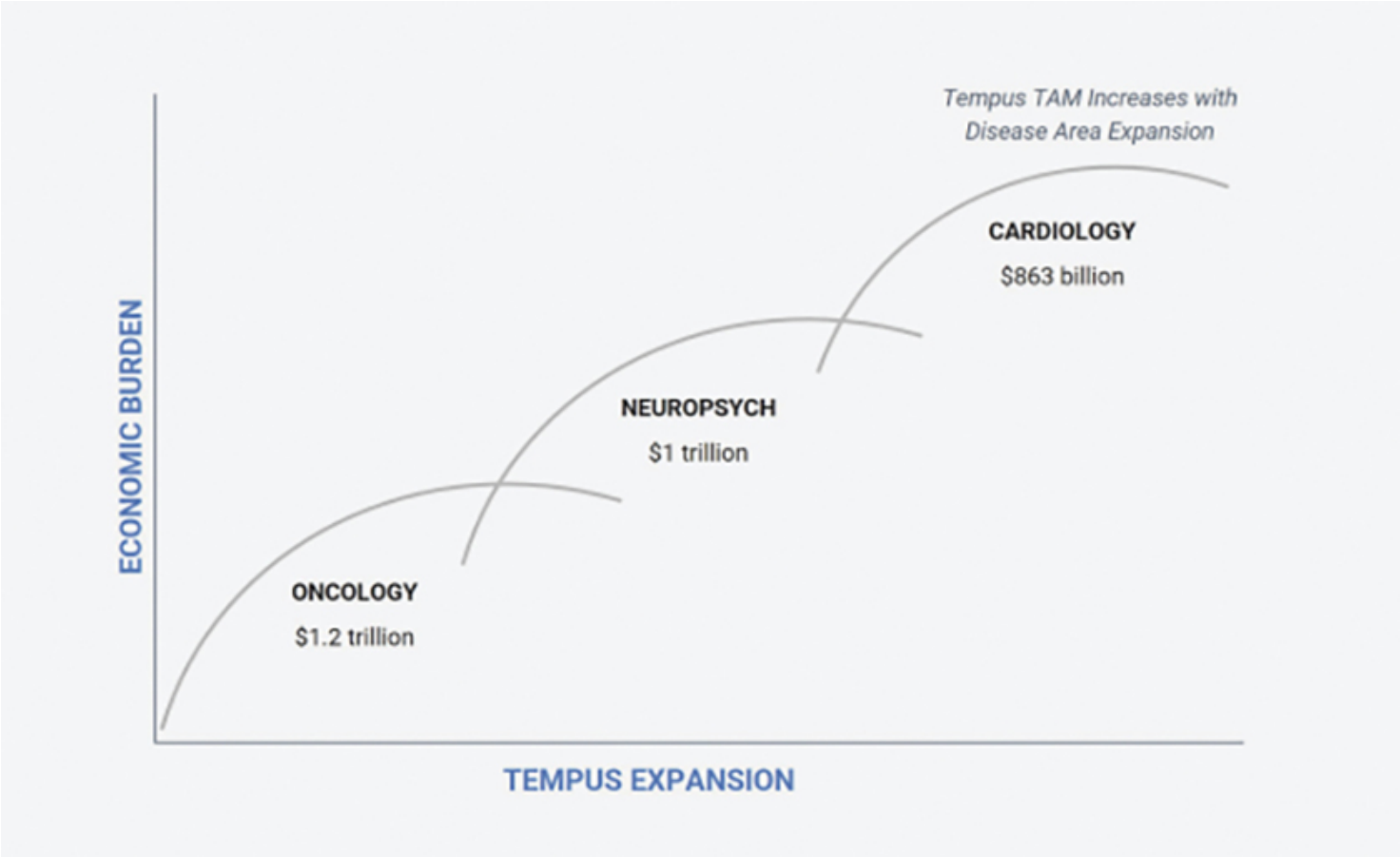
Sermonix is a powerful example of the potential for our Trials product to expand access to clinical trials and identify hard-to-reach patients. Sermonix, a pharmaceutical company focused on women's oncology, opened a biomarker-driven trial and partnered with Tempus to identify ESR1-positive breast cancer patients. According to the Tempus database of de-identified patient data, ESR1 mutations develop in approximately 14% of all breast cancers. Before engaging Tempus, Sermonix targeted enrolling 24 patients in 18 months and estimated study completion in October 2022.

After Sermonix enrolled in the Tempus TIME Trial® program, we were able to screen and enroll the first patient in September 2020, within weeks of the trial opening. Within the first month, we activated five TIME Trial® sites before the contract research organization, or CRO, with whom Sermonix was working was able to activate its first site. Ultimately, Tempus helped Sermonix activate ten new trial sites through the TIME Trial® program in an average of ten business days for each site. By comparison, it took on average 230 days for the CRO to open each new site. Tempus enrolled 14 of the ultimately 29 patients in the study, and helped shorten the full enrollment time down to ten months.

Our Market Opportunity

We believe our Platform's impact on healthcare could be profound, and that quantifying our potential market opportunity is challenging, especially for opportunities like Algos that are in their infancy. Our Platform is particularly well suited when there exists both heterogeneous conditions that make up a diseased population and a variety of prescribed therapeutics or therapeutic pathways, often based on trial and error. When these conditions exist, we believe technology and AI have the potential to facilitate precision medicine through data associations that substantially reduce the guesswork associated with which drug to prescribe, in what amount, and in which order. We are currently focused on oncology, neuropsychology and specifically depression, cardiology, and radiology, in which there is over $3 trillion of economic burden according to publicly available sources.

Within these markets, our Platform addresses both the clinical diagnostic testing market as well as the market for therapeutic research and development. Our Genomics product line targets an addressable market opportunity for diagnostic testing services that we estimate at over $70 billion across oncology and neuropsychology. Our Data and Services product line operates within a market in which life sciences companies spent an estimated $238 billion in 2022 on research and development according to Evaluate Pharma, and addresses needs within the $42 billion clinical trial services market, the $62 billion market for biomarker discovery, and the $29 billion market for "real world evidence", according to Mordor Intelligence and our internal estimates. We believe that the potential market opportunity for our Algos product line could be substantially larger than our other product lines combined.



Genomics Product Line Market Opportunity

Our automated lab infrastructure is capable of a variety of testing modalities and applications, spanning both anatomic and molecular diagnostics. We believe this infrastructure will enable us to address a wide range of emerging testing applications. We are currently focused on both liquid and tissue molecular testing in oncology, as well as tests for neuropsychology and infectious disease. In oncology alone, the market for NGS sequencing is expected to grow substantially over the next several decades.

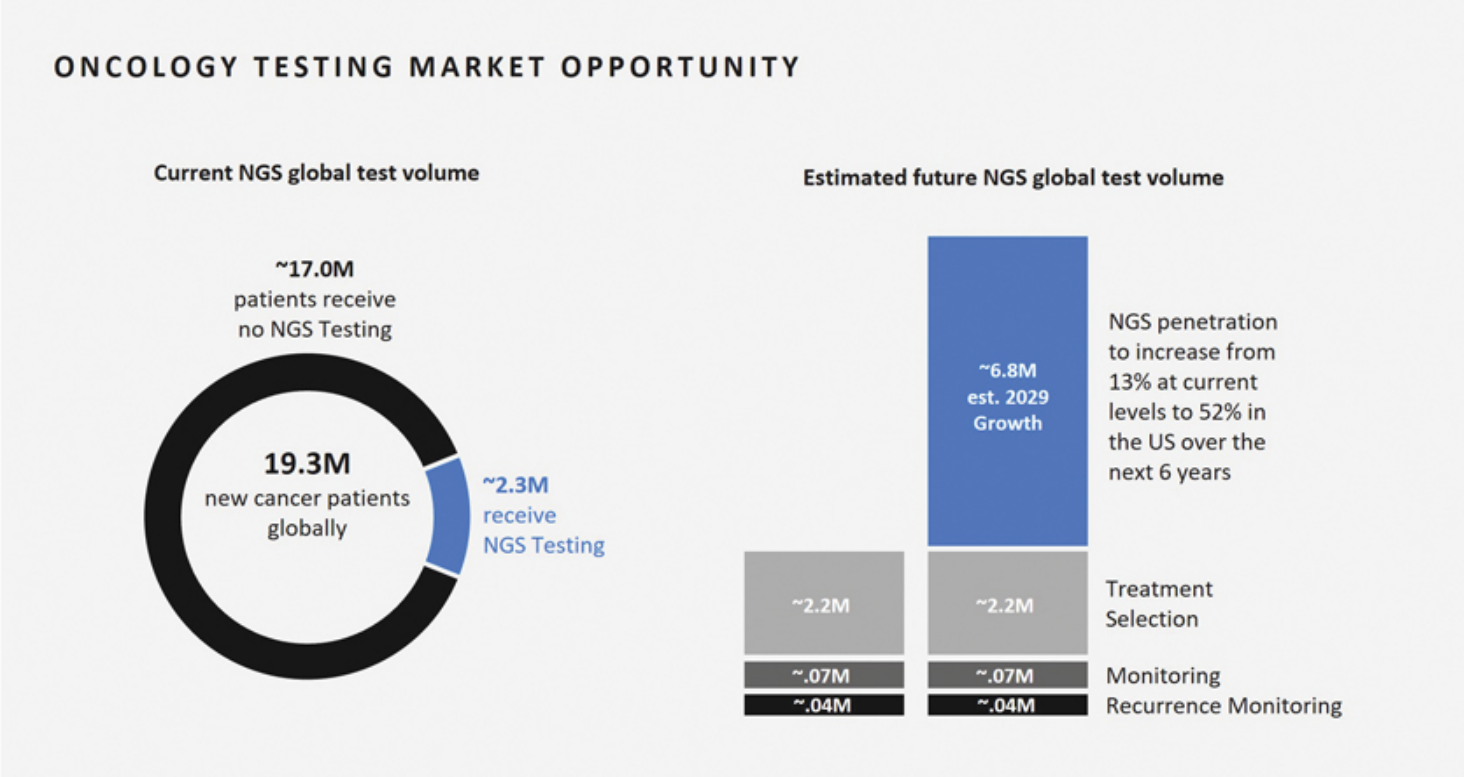
Oncology Testing Market Opportunity

At present, we offer three main assays in cancer, including solid tumor profiling, liquid biopsy, and inherited cancer risk screening, and expect to commercialize our fourth assay for cancer recurrence monitoring and measuring minimal residual disease in 2024. We believe that our technology integration, and go to market and commercial infrastructure may provide a strategic advantage, and our assays provide a comprehensive and holistic range of options for physicians and patients. Over time, we anticipate being able to address other emerging NGS oncology markets, such as early disease screening, as our most recent cancer recurrence and MRD assay (xM) is based on joint methylation signature and variant calling workflow for minimal residual disease detection.

We believe the oncology testing market is underpenetrated and represents an estimated $60 billion annual global market opportunity across the following testing applications on which we are focused.

Therapy selection: We address the market for therapy selection with our current tissue and liquid biopsy assay offerings and immunohistochemistry staining. We believe that NGS is increasingly becoming the standard of care to help physicians choose a therapy for their cancer patients across multiple cancer types. There were approximately 19.3 million patients estimated to be newly diagnosed with cancer globally in 2020 according to GLOBOCAN, and NGS was performed on only 2.3 million of these patients according to our estimates. Genomic markers are connected to FDA approved therapeutics for cancers including breast, cervical, cholangiocarcinoma, colorectal, skin, esophageal, stomach, head and neck, leukemia, certain other blood cancers,

ovarian, prostate, sarcoma, melanoma, thyroid and urothelial. Moreover, there are additional FDA approved therapeutics that are pan-cancer in nature, for which the therapeutic agent may provide treatment options for patients with the identified targeted biomarker, no matter what type of cancer. In addition to newly diagnosed cancer patients, there is also the opportunity for NGS testing to profile patients participating in clinical trials. According to ClinicalTrials.gov, there are approximately 107 immuno-oncology and 3,005 targeted oncology therapy programs ongoing with a total of 539,520 patients enrolled. Combined, we estimate that therapy selection accounted for 20 million tests globally in 2020 and believe that this will grow substantially as patients may be tested multiple times in the future to inform therapy. According to the National Cancer Institute, an estimated 1.8 million patients were diagnosed with new cancer in the United States in 2020.



Monitoring: We anticipate launching our liquid biopsy test for cancer recurrence monitoring and minimal residual disease in 2024. While this market opportunity is currently emerging, we anticipate that newly diagnosed cancer patients would benefit from a test that could monitor for cancer recurrence following surgical resection or first line therapy as well as monitor for minimal residual disease (MRD) while on therapy. For those estimated 19.3 million newly diagnosed cancer patients globally in 2020 according to GLOBOCAN, we believe that multiple tests within the first year following treatment to monitor for recurrence and minimal residual disease could improve clinical outcomes and become the standard of care for many subtypes in the future. In addition, we believe that a test to monitor for recurrence over a longer time period would also benefit a subset of cancer survivors that are at high risk of recurrence. According to our estimates, a substantial number of cancer patients across all cancers will recur within their lifetime and we estimate a higher percentage are at high risk of recurrence. There were approximately 43.8 million cancer survivors in 2018 globally that were diagnosed within the five years previous to 2018 and there are approximately 17 million cancer survivors in the United States in 2020. We anticipate that a majority of these patients would benefit from a periodic test over time to test for cancer recurrence and believe it may become standard to test these patients regularly as a means of monitoring their disease progression. Based on certain of our estimates and assumptions, we believe that in newly diagnosed patients alone our recurrence monitoring and minimal residual disease test had a more than 50 million test annual global opportunity in 2020.

Neuropsychology Market Opportunity

We estimate the market opportunity for our nP pharmacogenetic test to inform therapy for patients with depression, anxiety, and bipolar disorder was approximately $10 billion in 2020. In 2017, an estimated 12.5 million patients received treatment for major depressive disorder, or MDD, according to data provided by the National Institute of Mental Health. We believe the opportunity to bring AI to neuropsychology is significant and we are at the early stage of the market evolution. It is estimated that 40 million Americans alone suffer from anxiety, and over 25 million Americans have had an episode of depression in the last year alone according to the Anxiety & Depression Association of America. Despite its growing prevalence, treating depression and anxiety remains difficult. Today, there are dozens of antidepressants that are typically prescribed in a trial and error format, where psychiatrists alter the dose and class of medications when one fails to work. The difficulties in prescribing medications leads to many patients taking the wrong medications in the wrong dose. Emerging evidence suggests that there are molecular mechanisms that suggest one drug, or class of drugs, may work better than another based on the genetic profile of the patient. This field, pharmacogenomics, has only recently emerged and has the potential to be as transformative in neuropsychology as it has been in oncology.

Data and Services Product Line Market Opportunity

Our Data and Services product line provides pharmaceutical and biotechnology companies an alternative to acquire data that they would otherwise need to generate through other more expensive means, like running studies, to inform decisions across the drug development lifecycle. It also helps facilitate patient identification and recruitment for clinical trials. According to Evaluate Pharma, in 2022, an estimated $238 billion was spent on clinical development in the United States. Within this market, our Data and Services product line addresses the following spending categories for biotechnology and pharmaceutical researchers:

- Clinical trials market: $42 billion spend in 2022 according to Mordor Intelligence.
- Biomarker discovery: $62 billion spend in 2022 according to Mordor Intelligence.
- Real world evidence: $29 billion spend in 2020 according to our estimates based on third-party research.

AI Applications Product Line Market Opportunity

Over the longer term, we estimate that the potential market opportunity for our *AI Applications* product line could be orders of magnitude larger than the current total combined market opportunity of our Genomics and Data and Services product lines. Although such tests currently represent a small portion of laboratory testing volume today, we believe in the long-term, they could represent a significant percentage of the market, as more and more algorithms are developed that produce diagnostic insights. Within the United States, there are more than seven billion clinical diagnostic tests run annually according to the American Clinical Laboratory Association. We believe our integrated diagnostic Platform provides us with a differentiated foundation for the development and deployment of algorithmic diagnostics, uniquely positioning us to capitalize on this new and emerging market opportunity.

Our Competitive Advantages

We believe the combined power of technology, data, and AI will have a profound impact on the broader healthcare industry, transforming diagnostics, and enabling physicians and researchers to make data-driven decisions that improve clinical outcomes for patients. The industry today largely relies on diagnostics that are often based on a single source of data and do not employ datasets that are appropriate for many researchers and are frequently unable to provide adequate clinical context to inform personalized therapeutics. Tempus, on the other hand, has created an integrated Platform through which we can deploy AI, and has assembled what we consider to be one of the world's largest libraries of clinical and molecular data, and an operating system to make our information useful for physicians and researchers. We believe our competitive advantages, which we describe below, will enable us to drive widespread commercial adoption of our Platform.

We are both a technology company and a healthcare company, allowing us to harness the advantages of both to advance precision medicine.

We believe the challenge of bringing technology, data, and AI to healthcare requires deep industry expertise across both healthcare and technology. We believe Tempus is well positioned as both a technology company, harnessing the power of data and analytics to help usher in a new era of personalized medicine and a healthcare company, providing AI-driven diagnostics across multiple disease areas. We bring technological capabilities across data and generative AI, which are rarely found among diagnostic companies and yet are necessary for precision medicine. We believe we are differentiated from potential technology competitors in that we have built our Platform to successfully operate in the highly regulated healthcare environment, perform diagnostic testing services as a covered entity, and ingest, collect, structure, and deploy patient data benefiting key stakeholders in the healthcare ecosystem. The team we have assembled has broad experience across technology and healthcare commensurate with the challenge we are undertaking. Our leadership has successfully founded, grown and held leadership positions at technology companies, healthcare providers, life sciences companies, and regulatory bodies such as the FDA. We have approximately 2,000 employees, including hundreds with diverse expertise in genetics, molecular and computational biology, bioinformatics, regulatory affairs, medical, product and engineering, and data science. Roughly one-third of our team is technical, with approximately 250 PhDs and MDs on staff. In addition, as a testament to our balanced workforce, we have almost as many lab technicians as we have software engineers.

We have built a Platform that is connected to hundreds of provider networks, allowing us to amass a large repository of multimodal data that we believe is essential for bringing AI to healthcare.

We believe we are the first to build an Intelligent Diagnostic platform at scale that is connected to vast amounts of multimodal data and an operating system to make that information useful for both physicians and researchers, with the ultimate goal of serving patients. Our Platform consists of integrated elements working together to grow our database, generate Intelligent Diagnostics, and help physicians make data-driven decisions in real time in the clinical setting. We have established dedicated data pipelines to ingest large amounts of complex multimodal data from healthcare institutions through more than 500 direct data connections, many of which supply us with data in near real time, across approximately 2,000 healthcare institutions that order our products and services. We also built a laboratory infrastructure that is capable of providing a robust suite of testing services, including tissue and liquid biopsy sequencing for our customers. Although our company was founded in late 2015, we have already demonstrated the ability to bring AI to healthcare and provide Intelligent Diagnostics to enable precision medicine at scale. Our database of multimodal, de-identified records has grown to be more than 40 times the size of The Cancer Genome Atlas, the largest public genomic dataset that we know of in oncology. We also now have more than 190 petabytes of data in our cloud environment. We have also extended our Platform into neuropsychology, radiology, and cardiology. We believe each of the elements of our Platform is difficult for others to replicate.

Our Intelligent Diagnostics provide significant value to our customers, which has fostered broad adoption of many of our products.

Our Platform was designed to align the interests of, and benefit, key stakeholders across the healthcare ecosystem, with the ultimate goal of helping patients. For physicians and other healthcare providers, we offer a suite of products and services that enable them to accelerate their precision medicine efforts, regardless of whether they work in the community setting or within a large healthcare institution. We offer a comprehensive molecular testing portfolio that includes tissue and liquid biopsy NGS tests, which are intelligent, able to provide clinical context for patients, and may help inform therapeutic decisions as a result. In addition to Intelligent Diagnostics, we offer physicians and researchers numerous analytical and software tools to help them manage patients, perform analytics, and derive insights from being a part of our network. We make available to those providers and researchers the raw files that result from our sequencing together with structured clinical data we abstract related to that testing. Through our Trials product offering, we also help oncologists identify patients

eligible for clinical trials. Over time, we believe our AI Applications product line will offer physicians and patients unique and clinically actionable insights that are only possible by virtue of the data we have assembled. For pharmaceutical and biotechnology companies, we offer paid access to our de-identified database, with unique breadth, quality, and diversity of data, to inform drug discovery and development. We believe our dataset is the largest and most comprehensive to date in oncology (with other disease areas following), spanning multiple data modalities including: phenotypes, pathology slides, radiology scales, DNA, RNA, TCR/BCR, cfDNA, HLA types, immunohistochemistry, lab results, therapy outcome and response data, single cell sequencing, methylation, microbiomics, and epigenomes.

Our business model has inherent network effects that help drive adoption and improve our data advantage with each new order placed.

Each of our three product lines is designed to collectively leverage our database, strengthen the other product lines, and create network effects and competitive advantages within our markets. Our Genomics product line, including our core diagnostics offering, serves as a foundation for our Data and Services product line, which in turn drives our AI Applications product line. As we collect more data, our tests become more accurate, we launch more applications, and more physicians join our network, thereby growing our database even further to make our tests more precise for clinicians and our database more valuable for researchers. There are multiple network effects we believe will provide a significant competitive advantage and drive adoption of our Platform over time. First, as our Platform becomes more accurate and precise, we believe it inherently drives commercial adoption with physicians and other providers. The breadth and diversity of our multimodal database enables us to deploy generative AI to improve upon our current tests by making them more accurate and more precise. This helps drive new physicians onto our Platform which further increases the size of our database. As our database grows, it increases our ability to develop entirely new tests, such as Algos, which can further drive adoption among physicians. Second, the growth of our database inherently drives commercial adoption with pharmaceutical and biotechnology companies. An increasing number of physicians and other providers using our tests helps grow our database, which increases its value to researchers, as well as results in a larger customer network through which we can facilitate therapy selection and clinical trial recruitment. Unlike traditional laboratory diagnostics, we have the ability to monetize de-identified data in multiple ways, which provides an opportunity to drive revenue beyond just the revenue we receive for running a laboratory test. We believe this creates a competitive advantage as our business model allows us to offer genomic solutions and build proprietary datasets in ways other lab testing providers cannot, as many of them are focused on maximizing reimbursement and do not have ancillary revenue streams as we do. Moreover, the longitudinal nature of the data we collect further enhances our revenue opportunity as the records we collect have value over time, given that outcomes and response evolve as patients progress through treatment.

Our Platform was built to collect, structure, harmonize and analyze large amounts of multimodal data and make use of large language models deploying generative AI applications in healthcare.

We designed our Platform to be data agnostic. Our Platform can ingest and harmonize data from a wide variety of different healthcare data modalities. Unlike many other laboratory testing providers that focus on a specific modality of data, such as genomics, we currently ingest longitudinal clinical data from EHR including imaging data, generate DNA and RNA profiles along with other forms of molecular data, and perform anatomic pathology analysis. Our unique dataset allows us to leverage multimodal data to deploy generative AI across the large language models we develop and provide Intelligent Diagnostics that generate insights that may be more powerful than insights provided by a single modality of data alone. We believe the healthcare industry is continuing to move towards using orthogonal and varied datasets to inform decision-making, and we are well positioned to be a partner of choice to facilitate this transformation.

Our Platform is disease agnostic and facilitates rapid expansion into different disease categories.

While we started in oncology, our capabilities to collect, structure, and harmonize data, and deploy AI solutions, are applicable to other disease areas. We believe having a multi-disease focus enables us to engage

with providers and pharmaceutical companies in a more comprehensive manner than if we were focused on a single disease. As institutions are often looking for ways to deploy precision medicine broadly across diseases, we believe we are well positioned to be their partner, particularly given our established traction within precision oncology and our emerging strength in other disease areas. We have successfully leveraged the core capabilities of our Platform to expand our offering beyond oncology as we entered into neuropsychology in 2020 (MDD, bipolar disease, anxiety), radiology and cardiology in 2023.

The size of our database and the breadth of our multimodal data capabilities position us well to be able to launch AI Applications at scale.

We believe our AI Applications product line represents an emerging category of diagnostics that are algorithmic in nature and has the potential to be highly disruptive across a broad set of disease areas. For example, our currently deployed Algos use data the same way laboratory diagnostic companies use chemistry in the battle against disease, improving patient care by learning from the patients who have come before, and tailoring test results based on each patient's unique profile. We believe that as our database grows, we will be able to expand our AI Applications offering, representing a significant long-term opportunity that may be substantially larger than our other existing product lines. We believe our ability to launch AI Applications at scale is a key differentiator of our Platform. We believe our unique data set will enable us to bring the benefits of generative AI and large language models to healthcare, as our curated, multimodal database can be used as a proprietary training set to build a variety of AI based applications, which we intend to deploy through our existing network and distribution platform.

Many of our products and services are already widely used throughout the healthcare ecosystem.

We have established a network that we believe would be difficult for potential competitors to replicate. We have relationships with providers, life sciences companies, and leading industry associations that help provide key competitive advantages around our Platform. We work with hundreds of provider networks, including more than half of all academic medical centers in the United States. We have more than 500 direct unique data connections, many of which supply us with complex multimodal data in near real time, across approximately 2,000 healthcare institutions that order our products and services. In addition, we work with numerous industry associations, such as ASCO to structure and distribute the oncology data they collect as part of CancerLinq, which is their oncology data effort. To align interests with the healthcare providers who share data with us, we have developed software products and services that help our partners leverage data and benefit from being part of our network to improve patient care and research. These products have gained significant traction over the past five years, as our offerings are used by more than 6,500 physicians in some way. Between our sequencing and data collection efforts, we are connected in some way to more than 50% of all oncologists practicing in the United States. The value of our products is further evidenced by our volume of repeat ordering from oncologists. Through December 2022, the 12-month retention rate for physicians ordering more than 5 oncology NGS tests was 85% and for physicians ordering more than 25 oncology NGS tests, it was 93%. We define an active physician as those that have placed an oncology NGS test in the last 365 days. The 2022 retention rates are calculated by dividing the number of active physicians in 2021 who have placed more than 5 or 25 oncology NGS tests and also placed an order in 2022 by the total number of active physicians in 2021 who placed more than 5 or 25 oncology NGS tests. As of December 31, 2021, the number of active physicians that had ordered more than 5 oncology NGS tests in the last 365 days was 2,547, and the number of physicians that had previously ordered more than 5 oncology NGS tests but did not order one in 2022 was 374. As of December 31, 2021, the number of active ordering physicians that had ordered more than 25 oncology NGS tests in the prior 365 days was 1,338, and the number of physicians that had previously ordered more than 25 oncology NGS tests but did not order one in 2022 was 98.

Our Growth Strategy

Our goal is to make the promise of precision medicine a reality, and dramatically improve outcomes for those most in need through the broad adoption of AI-enabled diagnostics. Our growth strategy is to:

Grow our database and the number of providers connected to our Platform.

Our database is core to our business model and our ability to deploy AI at scale to enable precision medicine and generate value for ourselves and our customers. We believe we have developed a unique leadership position in the industry, in the United States, given the data we have been able to amass and aim to continue to fuel this growth. We intend to do so by driving commercial adoption of our Platform with healthcare providers, expanding our data sharing relationships, and growing the number of our unique data connections and the hospitals with whom we share data. We also intend to expand our relationships and establish new relationships with industry bodies and associations to help them structure and harmonize their own data to facilitate improvements in patient care. We expect to invest in our laboratory capabilities to leverage the latest technologies and to expand into additional diagnostic modalities as they become adopted by our customers and relevant for helping patients find optimal therapeutics. We are agnostic as to where data originates so long as it enhances precision medicine. Over time, we may also use our Platform to help catalyze the value of data produced by other sources, including other labs. As such, we may evaluate business development opportunities to help grow and consolidate data, whether produced by us or others, both in the United States and abroad.

Drive increased adoption of our Genomics product across healthcare providers.

We serve clinical and research customers broadly through our Genomics product line. We are focused on driving market adoption with physicians by providing a complete portfolio of Intelligent Diagnostics and a suite of software applications that enable them to enhance their precision medicine efforts. We leverage customer feedback to inform product development, including making our tests more precise, and develop new tests and applications that help physicians deliver better clinical outcomes. In oncology, while we currently provide information to help physicians select the right therapy and make sure their patients have access to the most appropriate clinical trials, we are also expanding into other applications, such as disease monitoring and recurrence detection through our new minimal residual disease test, which is currently being validated. We also help clinicians practice precision medicine and provide genetic testing in other disease areas, including neuropsychology and infectious disease. We employ a direct sales force in the United States focused on driving adoption with the clinical community and raising awareness of the benefits of our Platform. For research, we aim to drive adoption of our Genomics product line with life sciences companies by supporting their testing needs for clinical trials and through the development of companion diagnostics. At present, we have more than 170 sales representatives focused on our Genomics offering, and intend to significantly add resources to the team over time.

Drive increased adoption of our data licensing and clinical trial matching products with pharmaceutical and biotechnology companies.

As of September 30, 2023, we have worked with over 100 biotech companies, as well as 19 of the 20 largest public pharmaceutical companies based on 2022 revenue. Our goal is to provide our pharmaceutical and biotechnology customers with a Platform that helps them address challenges throughout their entire product lifecycle. Access to our database, provider network, and laboratory testing capabilities allow our customers to advance their research and clinical initiatives from biomarker discovery through commercialization. The value of multimodal data for informing drug discovery and development is becoming increasingly well understood by life sciences companies. We plan to take advantage of this trend and work to grow the number of companies purchasing de-identified data from us through our Insights product, both those that license data on a per-de-identified record basis as well as those that subscribe to our broader database. We also plan to continue to develop and commercialize software and analytic tools that make the products and services built on our Platform easier to use, including our Lens application that enhances cloud and compute analytical capabilities for

researchers. For our Trials product, we aim to grow the number of oncologists and the number of clinical trials participating in our network, and to increase the number of patients we identify to enroll into clinical trials. We are leveraging our direct sales force focused on providers to facilitate the onboarding of oncologists and have an enterprise sales team that focuses on pharmaceutical and biotechnology companies to increase the number of clinical trials in the network.

Validate and deploy AI Applications at scale.

We currently have AI Applications commercially launched through our three Algos in oncology: our TO test, our HRD test, and our DPYD test. We seek to launch additional Algos in oncology and other disease categories, such as cardiology where we have multiple Algos in development. For example, we received breakthrough designation from the FDA for our AFib algorithm based largely on ECG data, and we have a number of other cardiology Algos in development that use ECG data as a primary predictor of potential indications and outcomes. We also intend to focus on growing our primary AI Applications product called "Next," which is an AI-platform that leverages machine learning to apply an "intelligent layer" onto routinely generated data to proactively identify and minimize care gaps for oncology and cardiology patients. As this product gains adoption, we intend to leverage large language models, generative AI algorithms, and our vast database of de-identified data to develop algorithmic diagnostics designed to identify these patients earlier in their disease progression, when treatments are most effective. We will also seek to launch additional AI Applications, such as implementing new software as a medical device and building and deploying clinical decision support tools. We are commercializing our current Algos to physicians through our direct sales force focused on the clinical market. As more Algos are clinically validated, we expect to leverage this channel to sell additional Algo tests. Over time, we may open our database to third parties to allow them to develop their own Algos using our database, or add our Algos to their existing laboratory tests. We believe the size, breadth, and diversity of our data will ultimately facilitate development of AI Applications across multiple disease categories.

Expand our capabilities and commercial traction outside of oncology, including in neuropsychology, radiology, cardiology, and other disease categories.

We built our Platform to be disease agnostic, and we aim to grow adoption in disease categories in which connecting multimodal data and AI can improve decisions and analytics for physicians and researchers. We believe our AI-enabled Platform is uniquely positioned to generate insights when there exist both heterogeneous conditions among a diseased population and a variety of potential therapeutics or therapeutic pathways, often prescribed based on trial and error. In these disease categories, technology and AI have the potential to facilitate data associations and substantially reduce the guesswork as to which drug to prescribe, in what amount, and in which order. We believe these conditions exist in oncology, neuropsychology, and cardiology, as well as numerous other life-threatening and chronic diseases. Through our existing relationships with providers and life science companies, we believe we have a high level of visibility into where key healthcare stakeholders desire to advance precision medicine. We believe our Platform is applicable across multiple disease categories, and we plan to extend our offering into additional disease areas. Over time, we believe AI enabled diagnostics will impact all disease categories, and our disease agnostic Platform, broad technology capabilities, and vast customer network, position us well.

Expand internationally.

We believe the opportunity to deploy data and AI in healthcare is global. In many geographies, we believe the healthcare infrastructure is ripe for AI, and in some cases, the ecosystem is even more developed than in the United States. Over time, we intend to expand our capabilities internationally. We are evaluating multiple expansion opportunities, both organic and inorganic. We may acquire or partner with an established entity to facilitate market entry, or we may choose an alternative path focused on organic expansion.

Commercialization

Our commercial efforts are generally focused on driving increased adoption of our various products and services, both by increasing the utilization of existing customers and securing new customers. We employ targeted sales and business development organizations, whose team members are engaged in direct sales and marketing efforts. Our commercial teams typically target healthcare providers and life sciences companies, which are the main purchasers of our products and services. We describe below our overall commercial strategy for each of our three products.

Genomics

Our Genomics product line, largely made up of molecular testing, has two primary customers: physicians and bio-pharma companies. When we sell our tests to physicians we are typically providing them as part of routine clinical care and we are often billing insurance and seeking reimbursement on behalf of the patients for whom the test was ordered. When we sell our test to bio-pharma, we are typically being paid as a contract sequencing provider, either for the trials they are running or as a companion diagnostic to their drug. On the physician side, we commercialize our Genomics products in the United States to clinicians and healthcare providers largely through our dedicated clinical sales organization, that calls on individual doctors or medical practices. As of September 30, 2023, our clinical sales organization in the United States included more than 160 sales representatives who are primarily contacting oncologists, psychiatrists, and other healthcare providers. Our sales representatives typically have backgrounds either in a particular disease area (such as oncology or neuropsychiatry) or in laboratory testing and therapeutics more generally. We supplement our commercial team with clinical specialists with extensive medical affairs experience who provide molecular support in the field.

In oncology, which currently is our largest market, we are focused on driving adoption by targeting individual treating physicians, academic medical centers, community oncology practices, leading physician networks, and industry associations. We also are exploring relationships with third-party payers and governmental institutions. We have a land and expand strategy, by account, whereby we attempt to sign new accounts and increase adoption of our platform within these accounts over time. As such, we often begin a relationship that is transactional in nature, but seek over time, to work on a more comprehensive basis with healthcare providers, serving an ever increasing percentage of our molecular diagnostic needs over time. We find that once a physician starts using Tempus, if they order more than 5 oncology NGS tests from us, their 12-month retention rate is 85%.

In addition, we believe that interactions among treating physicians help drive adoption of our products. We are focused on key opinion leaders in the industry through direct outreach and indirect marketing efforts. As of December 31, 2022, we have either published or been acknowledged in the following:

- 59 total (40 Tempus-authored) peer-reviewed articles published or accepted for publication in major journals, including publications such as *Nature Biotechnology, Clinical Breast Cancer*, *Nature Medicine,* and *Cell*.
- 83 total (66 Tempus-authored) poster presentations based on clinical and research data that have been accepted and presented at major scientific conferences.
- 16 oral presentations at scientific meetings such as the ASCO, ASCO Gastrointestinal and Genitourinary Cancer Symposiums, San Antonio Breast Cancer Symposium, and the American Heart Association Scientific Sessions.

We have a similar strategy in neuropsychology, in which we aim to increase the commercial adoption of our nP test for depression as part of the rapidly growing market for pharmacogenomic testing, with a goal to better understand, diagnose and treat neuropsychiatric disorders.

Our commercial strategy for other disease areas is expected to follow our strategy in oncology, which is to focus on offering a broad range of molecular diagnostics to the market, that are connected to clinical data, so we can track how molecular results correlate with outcomes and responses, thereby making our tests smarter and more personalized overtime.

Research Testing

A small component of our genomic testing involves testing performed in a research capacity. This type of testing is typically done under an agreed upon contracted arrangement for specific tests at specific prices and volumes. Typical customers in these arrangements are pharmaceutical companies engaged in testing for clinical trials, researchers who need genomic testing to further research activities, or a company marketing products or services of their own who elects to use us as a reference laboratory. In this type of research testing, the agreed upon rate for testing may vary significantly, and in some cases may even be offered as an in-kind service in exchange for other rights we obtain in the contracted relationship.

As it relates to selling our Genomic Products to bio-pharma, we have a dedicated team of sales executives focused on calling on biotech and pharmaceutical companies who use genomic sequencing services predominantly for the research they are conducting, the clinical trials they are running, or as a companion diagnostic to the extent their therapeutic relies on a bio-marker. To this group, we are typically selling retrospective and prospective sample testing services, as well as companion diagnostic development to support the approval and commercialization of therapeutics.

Data and Services

In addition to our field sales force, our Data and Services products rely on a dedicated business development team focused on enterprise sales to pharmaceutical and biotechnology companies in the United States and abroad. Our strategy with each customer is to demonstrate the value proposition of our Platform and de-identified datasets, and to expand the utilization of our Data and Services products across the organization from early-stage research through clinical development to commercialization. Given the broad and differentiated utility of our Platform, we believe we can support our pharmaceutical and biopharmaceutical customers across many applications, including:

- early stage research and development;
- discovery of new targets and mechanisms of acquired resistance;
- clinical trial patient identification and enrollment; and
- Analytic services, including cloud and compute.

We also expect to be able to capture other commercial opportunities from our genomic data, which can be used in combination with clinical outcomes or claims data for multiple applications, including novel target identification, label expansion, and other commercial applications.

As of September 30, 2023, we had approximately 34 sales executives in our Data and Services product line development organization. We divide these individuals by both geography and strategic account to ensure consistency and coordination across our sales efforts.

AI Applications

Our third product line, AI Applications, is focused on developing and providing diagnostics that are algorithmic in nature, implementing new software as a medical device, and building and deploying clinical decision support tools. Our primary AI Applications product is currently “Next,” an AI platform that leverages machine learning to apply an “intelligent layer” onto routinely generated data to proactively identify and minimize care gaps for oncology and cardiology patients. As this product gains adoption, we intend to leverage large language models, generative AI algorithms, and our vast database of de-identified data to develop algorithmic diagnostics designed to identify these patients earlier in their disease progression, when treatments are most effective.

We develop Algos in three ways: (i) we may develop them internally based on our robust de-identified dataset; (ii) we may collaborate with a third party to develop Algos together; and (iii) we may license an existing

Algo from a third party. Once we clinically validate an Algo, we typically bring it to market through our existing provider network by leveraging our Genomics sales force. For example, our HRD and TO Algos in oncology have been added to our standard requisition forms, online portal, and EHR integrations. Treating clinicians can order these Algos at the same time they place their standard clinical testing orders for our other Genomics products. We believe clinicians find significant value in being able to receive multiple answers from Tempus while only needing to provide one set of biospecimens, thereby reducing the burden on their patients and their staff. At present, we expect our Algos in other disease areas to go to market through our network of EHR integrations and clinical collaborations.

In October 2022, we acquired Arterys, Inc., a company that provides a platform to derive insights from radiology medical images to improve diagnostic decision-making, efficiency, and productivity across multiple disease areas. We have also developed algorithms based on IHC and H&E staining, which can be used, among other things, to help identify patients who may be eligible for additional treatments or clinical trials.

We commercialize AI Applications in multiple ways. With respect to Algos, historically, we have billed our Algos in oncology to third-party payers just like our other clinical tests. Beginning January 1, 2023, these three Algos will no longer be billed separately as there is now a dedicated CPT code to bill for the underlying wet lab procedure. The commercialization of future Algos will depend the nature of each and whether we are able to bill insurance separately. When we do so, we expect reimbursement will be limited for most Algos at launch and may grow over time as we build additional evidence to support the clinical utility and benefit of each Algo.

In addition to billing third-party payers, we also work with pharmaceutical companies and healthcare providers to deploy AI Applications that we bill directly to the customer.

Competition

The increasing value of using data to inform clinical care and drug development decisions is leading more companies to attempt to develop offerings that are marketed in a manner that makes them appear comparable to ours. As a result, each of our products faces increasing competition from a number of other companies.

Our Genomics products line primarily faces competition from diagnostic companies that profile genes in cancers and other disease areas, based on either single-marker or comprehensive genomic profile testing, using NGS to evaluate either blood or tissue. Our primary competitors for our currently marketed precision oncology tests include Foundation Medicine, Inc., which was acquired by Roche Holdings, Inc., Caris Life Sciences, Guardant Health, Inc., Natera, Neogenomics, ResolutionBio, which was acquired by Agilent, and others. As we expand into other applications such as recurrence monitoring or minimal residual disease, as well as potentially testing for early detection in the future, we anticipate facing competition from a broader universe of companies. Legacy diagnostic laboratories, such as Quest and LabCorp may also pose competitive threats within the market. Competitors for our pharmacogenetic test in neuropsychology include Myriad Genetics, Inc. and Genomind, Inc.

Our Data and Services products primarily face competition from companies that help pharmaceutical and biotechnology companies acquire data to inform drug discovery and development. Our main competitors in this area are Flatiron Health, Inc., IQVIA Holdings Inc., ConcertAI, and others. Our Data and Services products also face competition from CROs, such as Fortrea, ICON, Syneos, PPD, and others, who provide data and clinical trial matching services to pharmaceutical and biotechnology companies.

Our AI Applications products face competition from providers that are focused on providing laboratory testing or algorithm-based diagnostics for the disease and application areas in which our Algos are focused. Our TO test competes with liquid or tissue-based diagnostic tests from Roche Holdings, Inc., Caris Life Sciences, Guardant Health, Inc. Illumina, Inc, and others. Our HRD test competes with tests from Myriad Genetics, Inc., Caris Life Sciences, and others. We may also compete with companies developing or commercializing algorithm-based diagnostics using a variety of different data modalities, including digital pathology companies

such as PathAI, Inc. and PaigeAI. In cardiology we may compete with companies such as HeartFlow Inc. and Eko Devices, Inc. We expect other competitors to enter this market, including academic medical centers who develop their own Algos and are looking for new ways to commercialize them. We believe we are positioned well against this competition given our broad provider network and our ability to deploy AI solutions at scale through our Platform.

Many of our competitors may have substantially greater financial and other resources than us, including larger research and development staff, or more established marketing and sales forces. Other competitors are in the process of developing novel technologies for the diagnostics and healthcare data markets that may lead to products that rival or replace our products. While we cannot be certain as to how the market will evolve, today we believe we are substantially differentiated from our competitors for many reasons, including the network effects of our products, proprietary technologies, rigorous product development processes and scalable infrastructure, customer experience, and multidisciplinary teams.

For further discussion of the risks we face relating to competition, see the section titled “Risk factors—Risks Related to Our Business and Strategy.”

Payer coverage and reimbursement

Clinical Testing

A majority of the genomic testing we perform is clinical in nature. We typically receive reimbursement for these tests from commercial payers and from government health benefits programs, such as Medicare and Medicaid. In almost all of our arrangements for clinical testing, we take on the obligation (and risk) to bill the patient’s insurance for the testing being provided, subject to other laws that may require us to directly bill the healthcare provider in limited circumstances. We also have a small number of “direct pay” arrangements where the provider may agree to pay us a specific amount and take on the billing obligation (and associated risk of payment) for the testing performed for that customer’s patients, or where a third-party advocacy group or government agency has arranged for and agreed to pay for testing.

Laboratory tests such as our genomic tests, as with most other healthcare services, are classified for reimbursement purposes under a coding system maintained by the American Medical Association known as current procedure terminology, or CPT, which we use to bill and receive reimbursement for our tests. CPT codes are associated with the particular test that we have provided to the patient, but do not always precisely describe the testing offered.

Once the American Medical Association establishes a CPT code, the Centers for Medicare & Medicaid Services, or CMS, establish payment levels and coverage rules under Medicare (sometimes through national coverage determinations, or NCDs), although it delegates some of that authority to local Medicare administrative contractors, or MACs, who may have local coverage determinations, or LCDs, in place. Private payers establish their rates and coverage rules independently.

We received payment on approximately 50% of our clinical oncology NGS tests across all payors performed from January 1, 2021 through December 31, 2022. For the years ended December 31, 2021 and 2022, our average reimbursement for NGS tests billed to insurance in oncology was approximately $1,100 and $1,500, respectively. Our strategy to improve reimbursement is as follows:

- Continue to work with NGS, our local MAC in Chicago, to maintain coverage of current assays, obtain coverage of new assays through engagement and reconsideration requests, and to continue various appeals when coverage is denied.

- Continue to work with our new MAC, Palmetto, which covers our tests when performed out of our newest lab in Raleigh, North Carolina, to get the technical assessment of our assays approved and coverage policy in place for reimbursement.
- Continue to seek FDA approval of additional assays.
- Continue to work with commercial payers to both get in network and get our assay approved and reimbursement at a higher rate than it currently is.

At present, we have a team that is dedicated to the above, and if we are successful we would expect our reimbursement per assay to be more in line with other NGS providers who have adopted similar strategies, such as FMI and Guardant.

Algos

Because we expect the Algos we bring to market to provide value to a wide variety of stakeholders in the healthcare ecosystem, we anticipate that the payment we may be able to obtain will vary substantially. Value obtained is likely to depend on the nature of the underlying product or service developed, as well as the disease area and manner in which the product or service is made available. For example, while the current HRD and TO offerings are point-of-care ordered, and are reimbursed through our xR assay, we do not expect to be limited only to payment and reimbursement through the typical fee-for-service reimbursement model based solely on point-of-care clinical testing. We may also develop Algos in combination with life sciences companies in which we are paid directly or through alternative payment structures.

In sum, we expect that reimbursement for our Genomics products and Algos may provide value to, and potentially be paid for by, pharmaceutical companies, health maintenance organizations, managed care organizations, pharmacy benefit managers, large employers, and integrated delivery network health systems, in addition to being reimbursed by government healthcare programs, private insurers and other third-party payers. Those arrangements may take many forms. Pharmaceutical companies have expressed interest in using some of our Algos to better identify, screen, stratify, and enroll patients in clinical trials, payers have expressed interest in Algos that could assist them in value-based care initiatives that reduce spending waste in the healthcare system, and large health systems have expressed interest in certain population health screening Algos that could assist them in providing higher quality care, better outcomes for patients, and/or in reducing costs.

Operations

We currently perform our laboratory tests, including our NGS and anatomic pathology tests in our clinical laboratories in Chicago, Atlanta, and Raleigh. Our Chicago and Atlanta laboratories are CAP-accredited and CLIA-certified, and licensed in other states including New York, California, Maryland, Pennsylvania, and Rhode Island.

The scale our laboratories have been able to achieve in the approximately 6 year period since we ran our first clinical test is a direct result of the quality and experience of our laboratory staff, our investment in technologies in the laboratory that assist with automation and workflow improvements, and the ability of our engineering staff to build fit for purpose applications in a rapid development environment to support the laboratory's evolving needs. Our leadership staff in laboratory operations has decades of experience in running high-quality, high-throughput assays and have been instrumental in putting in place the necessary standard operating procedures to perform the volume of testing we do in a repeatable, reliable manner while constantly looking for opportunities to improve and refine our processes. The workflows in our laboratory are designed for high-throughput testing and numerous steps in the process are fully automated or semi-automated using robotics and other advanced workflow technologies. For our xT and xF tests, our laboratory workflows enable us to successfully deliver results over 95% of the time, assuming tissue is received that meets the minimum requirements we have outlined for our assays.

Our investments have allowed us to continuously drive turnaround time downward, to provide results to doctors and their patients in a timeframe that we believe now meets or exceeds many of our competitors who have been operating in the NGS space for longer. As of December 31, 2022, our average turnaround time for our xT assays was less than 12 days, and our average turnaround time for xF was eight days.

We believe that the strong foundational infrastructure in our laboratory operations, along with the technology used in our lab and the engineering expertise we have on hand is further differentiated when coupled with the connections we can rapidly deploy with our customers, and the experienced research scientists and doctors we employ, who are able to design and refine our highest volume assays in-house. We believe this unique combination will continue to allow us to rapidly respond to the changing needs of our customers and evolving market conditions.

Our Strategic Collaborations

AstraZeneca Master Services Agreement

In November 2021, we entered into a Master Services Agreement, or the MSA, with, and issued a warrant to, AstraZeneca AB, or AstraZeneca. Under the MSA, we agreed, on a non-exclusive basis, to provide AstraZeneca with certain of our products and services, including licensed data, sequencing, clinical trial matching, organoid modeling services, algorithm development, and others. In exchange for certain discounted prices, AstraZeneca has committed to spend a minimum of $200 million on such products and services during the term of the MSA. The minimum commitment may increase to $300 million upon the occurrence of any of the following events: (i) at AstraZeneca's election on or before December 31, 2024, (ii) the date that AstraZeneca exercises the warrant issued pursuant to the terms thereof (as described below), or (iii) in the event of an initial public offering, if the average closing price of our common stock exceeds two times the offering price for any 30-day trading period following the one-year anniversary of such initial public offering. The term of the master services agreement will continue through December 31, 2026, unless terminated sooner.

Under the warrant, AstraZeneca has the right to purchase up to $100 million in shares of our Class A common stock at an exercise price equal to the initial public offering price in this offering. The number of shares of Class A common stock issuable upon exercise of the warrant will be determined based on the initial public offering price in this offering (shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus). The warrant may be exercised any time following the date that is 180 days following the pricing of our initial public offering through December 31, 2026. AstraZeneca will be entitled to substantially the same registration rights with respect to the shares under the warrant as those granted to holders of registrable securities pursuant to our Ninth Amended and Restated Investors' Rights Agreement, dated November 19, 2020. See "Description of Capital Stock — Warrant." The warrant will be automatically canceled and terminated for no consideration, if not previously exercised, in the event AstraZeneca declines to extend its financial commitment before December 31, 2024. If AstraZeneca exercises the warrant, AstraZeneca will be required to increase its minimum commitment under the MSA to $300 million.

GSK Master Services Agreement

In August 2022, we entered into the GSK MSA. Under the GSK MSA, we agreed, on a non-exclusive basis, to provide GSK with certain of our products and services, including licensed data, sequencing, clinical trial matching, organoid modeling services, algorithm development, and others. In exchange for certain discounted prices, GSK has committed to spend a minimum of $180 million on such products and services during the term of the GSK MSA, of which $70 million was paid upon execution. The term of the GSK MSA will continue through December 31, 2025, unless terminated sooner. An additional commitment of up to $120 million may be triggered at GSK's election for the years 2026 and 2027.

Recursion Master Agreement

In November 2023, we entered into a Master Agreement, or the Recursion Agreement, with Recursion Pharmaceuticals, Inc., or Recursion. Under the Recursion Agreement, we agreed to provide certain of our services and to license certain data to Recursion, including a limited right to access our proprietary database of de-identified clinical and molecular data for certain therapeutic product development purposes. In exchange for these rights, Recursion will pay an initial license fee of $22 million and an annual license fee throughout the term of the agreement, which, together with the initial license fee, totals up to $160 million. The term of the Recursion Agreement will continue through November 3, 2028, unless terminated sooner. In addition to mutual rights to terminate for an uncured breach of the Recursion Agreement, Recursion may terminate the agreement for convenience after three years upon 90 days prior notice, subject to payment by Recursion of an early termination fee.

The initial license fee and each annual license fee are payable at Recursion's option either in the form of (x) cash, (y) shares of Recursion's Class A common stock, or (z) a combination of cash and shares of Recursion's Class A common stock in such proportion as is determined by Recursion in its sole discretion; provided that the aggregate number of shares of Recursion's Class A common stock to be issued to us under the Recursion Agreement shall not exceed 19.9% of the aggregate total of shares of Class A common stock and Class B common stock outstanding on November 3, 2023, or the date immediately preceding the date of any shares of Class A common stock issued pursuant to the Recursion Agreement, whichever is less. We have customary registration rights with respect to any shares of Recursion's Class A common stock issued pursuant to the Recursion Agreement.

Quality Assurance

We are committed to providing reliable and accurate molecular information to our customers. We have established sophisticated laboratory workflows and automated procedures to ensure accurate specimen identification, timely communication of results, and prompt discovery and correction of errors. We monitor our quality through a variety of methods, including objectively measured performance improvement indicators. Any quality concerns and incidents are subject to risk assessment, root cause analysis, and corrective action plans. Safeguarding protected health information, or PHI, is of primary importance.

We have established a comprehensive quality assurance program for our laboratory. Our quality assurance program includes policies and procedures covering personnel qualifications and training requirements, process and test validation, quality control of reagents and test processes, proficiency testing, routine monitoring, and internal audit. We have implemented policies and procedures to adhere to applicable requirements necessary for federal and state licenses and accreditation for clinical diagnostic laboratories, including policies and procedures related to patient and employee safety, hazardous waste disposal, and general laboratory management.

Supply chain

We have a highly automatic system in place to manage our workflow called LIMS, which also connects to our various supply chain systems through which we ensure materials our ordered in a timely manner, and the logistics of each order are overseen to ensure we are delivering orders, in the shortest time possible, with the highest quality possible.

We maintain significant inventory on hand of both laboratory consumables and other materials to avoid work stoppages and/or material delays. Our systems, processes, and procedures are designed to scale, as evidenced by the fact that we have become one of the largest sequences of cancer patients in the United States in just a few years, and have run approximately 2.8 million tests in the last twelve months ended December 31, 2022.

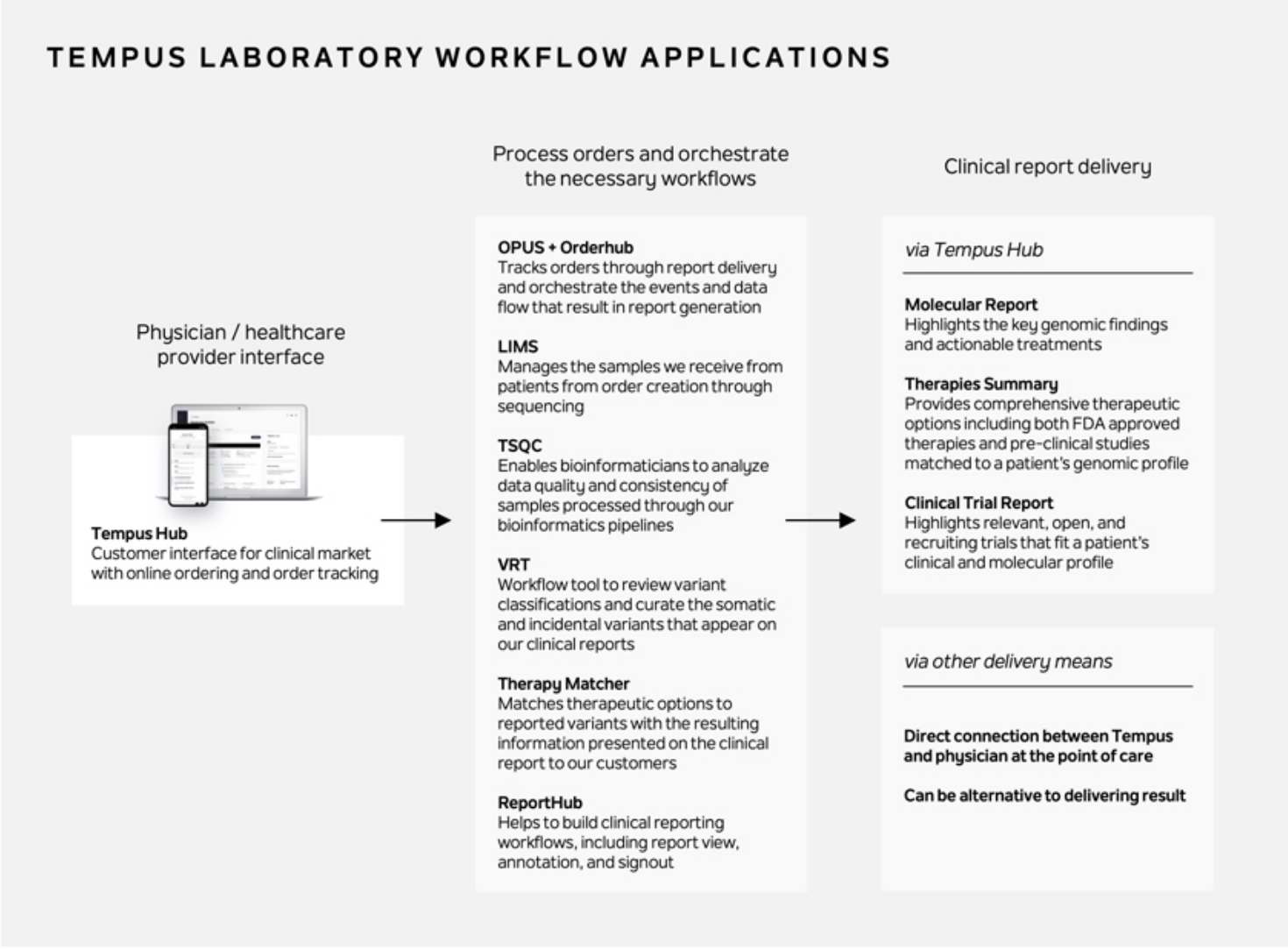
We rely on a limited number of suppliers, or, in some cases, sole suppliers to provide our products and services. Illumina, Inc., is our primary supplier of sequencers and laboratory reagents; however, we purchase laboratory supplies from other companies as well, such as Roche Holdings, Inc., Integrated DNA Technologies, and PerkinsElmer. We rely on standard commercial carriers for the delivery of samples to our laboratories.

In June 2021, we entered into a supply agreement with Illumina to provide products and services that can be used for certain research and clinical activities, including certain sequencers, reagents, and other consumables for use with the Illumina sequencers, as well as service contracts for the maintenance and repair of the sequencers. The supply agreement does not require us to order minimum amounts of hardware, or to use exclusively the Illumina platform for conducting our sequencing. The term of the supply agreement continues for a period of 12 years, unless either we or Illumina terminate the supply agreement for the other's uncured material breach, bankruptcy or insolvency-related events, or in the event a regulatory authority notifies such party that continued performance under the supply agreement would violate applicable laws or regulations. Illumina may terminate the agreement in the event we consummate a change of control transaction with a sequencing products company, and we may terminate the supply agreement for convenience upon 90 days' prior written notice.

In addition to suppliers who provide products supporting our provision of laboratory tests, we have cloud agreements with both AWS and Google. In June 2020, we signed a multi-year strategic partnership with Google that included an agreement through which Tempus procures extensive cloud services from Google. The cloud agreement includes a convertible note that is reduced as we procure services from Google and also contemplates co-innovation projects that we may work on with Google from time to time.

Laboratory Workflow Applications

With respect to the provision of laboratory services, in addition to Hub, our consumer- facing application, we have developed multiple software tools that facilitate back-end processing, workflow, and report generation. Our back-office software stack was custom developed around our workflow, allowing us to automate material components of our laboratory and order generation process. The following diagram represents the software applications supporting our laboratory workflow.



We have also developed a series of tools that allow us to access our connected dataset and our internal workflow tools, as we seek to query our own data and make it available both internally and externally. In an effort to facilitate a connection between our providers and our data, we built an application called *Tempus One,* which is both a physical device and a mobile software application that relays information contained in our oncology reports and supporting database to physicians through voice activated interactions in real time. We believe Tempus One has the potential to create a more efficient workflow for healthcare professionals, reducing the time needed to review and process information, providing more time for them to focus on patient care. Over time, we intend to embed more insights into Tempus One*,* and other similar applications we develop, thereby enhancing the amount of information readily available to our ordering physicians.

Data Structuring Applications

After we generate a clinical report through the provision of laboratory services, or once we obtain data through one of our dedicated connections to providers, we utilize a different suite of proprietary software applications to abstract, structure, and de-identify the resulting data to help augment our existing multimodal dataset and provide additional healthcare services to our customers. Our tools have become highly efficient over time allowing us to abstract data, often between 50-100 discrete data elements per patient case, in approximately an hour (or the cost equivalent), which do both onshore and offshore through dedicated teams we have established to perform the data curation and abstraction. In addition, we have the capability to perform enhanced abstraction, which can take several hours per patient case, allowing us to define a custom set of features over a defined period of time that we want abstracted. Each of our proprietary tools is designed to enhance our customers' experience, either by creating useful information that assists in the treatment of patients, or by creating an efficient back-end infrastructure that allows us to deliver our services more quickly and efficiently.

Information Security

We endeavor to maintain a robust information security program in an effort to protect all of the sensitive data we maintain, including PHI and PII and we take all threats to the availability, integrity and confidentiality of that data with the utmost seriousness. Our security program consists of a layered defense approach starting with appropriate data and system design through architectural principles that include security as a core component at every step of the process. This security by design approach is enhanced with physical security, host and endpoint device management, application security, and infrastructure and cloud security. In each of those areas, we utilize industry-standard third-party tools that are designed to assist our team of security professionals in their various tasks and we work closely with our vendors, including those who provide cloud computing services that make up substantial parts of our infrastructure (e.g., Google and Amazon).

Our security program is operationalized through documented policies, procedures and required training for all staff in the entire company, with special emphasis on key teams in engineering and IT operations who develop, monitor and maintain the applications and systems used in our business. In an effort to ensure that these policies are adhered to and that no new vulnerabilities arise, we conduct regular auditing of a wide swath of our security related measures, including a mix of self-audits, external penetration testing, external application security audits and audits performed by our customers and partners. Our security team is also instrumental in maintaining our ISO 27001 certification and assisting the compliance and legal teams with other legally required audits and provides detailed reports regularly to upper management and the Board on security related matters.

Intellectual Property

Our success depends in part on our ability to obtain and maintain intellectual property and proprietary protection for our products and technology, defend and enforce our intellectual property rights, preserve the confidentiality of our trade secrets, and operate without infringing, misappropriating or otherwise violating valid and enforceable intellectual property and proprietary rights of others. We are actively involved in research and development and therefore seek to protect the investments we have made into the development of our products

and technology by relying on a combination of patents, trademarks, trade secrets, know-how, and license agreements. We also seek to protect our proprietary technology, in part, by requiring our employees, consultants, contractors and other third parties to execute confidentiality agreements and invention assignment agreements and by implementing technological protections for our intellectual property.

As of September 30, 2023, our patent portfolio and patent applications consisted of 80 issued U.S. patents and allowed applications, 105 pending U.S. non-provisional patent applications, 12 pending U.S. provisional patent applications, 22 pending Patent Cooperation Treaty (international) patent applications, 37 issued foreign patents, and 138 pending foreign patent applications. Our issued patents are expected to begin expiring in 2033, assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees. These patents and applications generally fall into four broad categories:

- applications and patents relating to our Platform, including claims directed to product ordering processes; data processing and multimodal data analytics;
- applications and patents relating to our Genomics business, including claims directed to detecting and monitoring cancer and other diseases by determining genetic variations and other biomarkers in biological samples;
- applications and patents relating to our Data business, including claims directed to analysis of healthcare records and patient outcomes; and
- applications and patents related to our Algos business, including claims directed to machine learning diagnostics and predictions in cancer and cardiology.

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file or intend to file, including the United States, the patent term is 20 years from the earliest date of filing a non-provisional patent application. Additionally, a U.S. provisional patent application expires twelve months from its filing date, and its subject matter can only be claimed in an issued patent if, among other things, we timely file a non-provisional patent application making a valid priority claim to that provisional patent application before it expires. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier filed patent. We cannot be sure that patents will be granted with respect to any current pending patent application or with respect to any patent applications filed by us in the future, nor can we be sure that any current or future patents will be commercially useful in protecting our platform, products, services, technologies and processes. In addition, any patents that we may hold, whether owned or licensed, may be challenged, circumvented or invalidated by third parties.

The success of our business strategy also depends in part on our continued ability to protect our branded services, and we own registered trademarks on "TEMPUS" and product related brand names in the United States and worldwide.

We also rely on trade secrets, including know-how, unpatented technology and other proprietary information, to strengthen our competitive position. We seek to protect trade secrets and confidential and unpatented know-how, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to such knowledge, such as our employees, collaborators, manufacturers, consultants, advisors and other third parties. We also seek to enter into confidentiality and invention or patent assignment agreements with our employees and consultants that obligate them to maintain confidentiality and assign their inventions to us.

Our ability to stop third parties from making, using, selling, offering to sell or importing our Platform, services and products depends on the extent to which we have rights under valid and enforceable patents, trade secrets or other intellectual property and proprietary rights that cover these activities. We pursue intellectual property protection to the extent we believe it would advance our business objectives. Notwithstanding these

efforts, there can be no assurance that we will adequately protect our intellectual property or provide any competitive advantage. For more information regarding risks relating to intellectual property, see "Risk Factors—Risks Related to Our Intellectual Property."

Government Regulation

Regulation of Medical Devices in the United States

Our diagnostic products and services are subject to extensive and ongoing regulation by the FDA under the Federal Food, Drug, and Cosmetic Act of 1938 and its implementing regulations, collectively referred to as the FDCA, as well as other federal and state regulatory bodies in the United States. The laws and regulations govern, among other things, product design and development, pre-clinical and clinical testing, manufacturing, packaging, labeling, storage, record keeping and reporting, clearance or approval, marketing, distribution, promotion, import and export and post-marketing surveillance. Failure to comply with applicable requirements may subject a device and/or its manufacturer to a variety of administrative sanctions, such as FDA refusal to approve pending premarket applications, issuance of warning letters, mandatory product recalls, import detentions, civil monetary penalties, and/or judicial sanctions, such as product seizures, injunctions and criminal prosecution.

FDA Premarket Clearance and Approval Requirements

Unless an exemption applies, each medical device commercially distributed in the United States requires either FDA clearance of a 510(k) premarket notification, approval of a petition for premarket approval, or PMA, or grant of a de novo request for classification. During public emergencies, the FDA also may grant emergency use authorizations, or EUA, to allow commercial distribution of devices intended to address the public health emergency. Under the FDCA, medical devices are classified into one of three classes—Class I, Class II or Class III—depending on the degree of risk associated with each medical device and the extent of manufacturer and regulatory control needed to provide reasonable assurance of its safety and effectiveness. Classification of a device is important because the class to which a device is assigned determines, among other things, the necessity and type of FDA review required prior to marketing the device.

Class I devices include those with the lowest risk to the patient and are those for which safety and effectiveness can be reasonably assured by adherence to the FDA's "general controls" for medical devices, which include compliance with the applicable portions of the FDA's Quality System Regulation, or QSR, facility registration and product listing, reporting of adverse medical events and malfunctions through the submission of Medical Device Reports, or MDRs, and appropriate, truthful and non-misleading labeling, advertising, and promotional materials. Some Class I devices also require 510(k) premarket notification clearance as described below.

Class II devices are moderate risk devices subject to the FDA's general controls, and any other "special controls" deemed necessary by the FDA to ensure the safety and effectiveness of the device, such as performance standards, product-specific guidance documents, special labeling requirements, patient registries or post-market surveillance. Premarket review and clearance by the FDA for Class II devices is accomplished through the 510(k) process. The 510(k) submission must demonstrate that the device is "substantially equivalent" to a legally marketed predicate device, which in some cases may require submission of clinical data.

Class III devices include devices deemed by the FDA to pose the greatest risk, such as life-sustaining, life-supporting or implantable devices and devices deemed not substantially equivalent to a predicate device following a 510(k) submission. The safety and effectiveness of Class III devices cannot be reasonably assured solely by general or special controls. Submission and FDA approval of a PMA application is required before marketing of a Class III device can proceed. A PMA application is intended to demonstrate that the device is reasonably safe and effective for its intended use and must be supported by extensive data, typically including data from pre-clinical studies and clinical trials.

Emergency Use Authorization

In emergency situations, such as a pandemic, the FDA has the authority to allow unapproved medical products or unapproved uses of cleared or approved medical products to be used in an emergency to diagnose, treat or prevent serious or life-threatening diseases or conditions when there are no adequate, approved, and available alternatives.

Under this authority, the FDA may issue an EUA for an unapproved device if the following four statutory criteria have been met: (1) a serious or life-threatening condition exists; (2) evidence of effectiveness of the device exists; (3) a risk-benefit analysis shows that the benefits of the product outweigh the risks; and (4) no other alternatives exist for diagnosing, preventing or treating the disease or condition. Evidence of effectiveness includes medical devices that ''may be effective'' to prevent, diagnose, or treat the disease or condition identified in a declaration of emergency issued by the Secretary of U.S. HHS. The ''may be effective'' standard for EUAs requires a lower level of evidence than the ''effectiveness'' standard that the FDA uses for product clearances or approvals in non-emergency situations. Once granted, an EUA will remain in effect and generally terminate on the earlier of (1) the determination by the Secretary of U.S. HHS that the public health emergency has ceased or (2) a change in the approval status of the product such that the authorized use(s) of the product are no longer unapproved. After the EUA is no longer valid, the product is no longer considered to be legally marketed and one of the FDA's non-emergency premarket pathways would be necessary to resume or continue distribution of the subject product.

The FDA also may revise or revoke an EUA if the circumstances justifying its issuance no longer exist, the criteria for its issuance are no longer met, or other circumstances make a revision or revocation appropriate to protect the public health or safety.

Clinical Trials

Clinical trials are typically required to support a PMA and are sometimes required to support a 510(k) submission. All clinical investigations of devices to determine safety and effectiveness must be conducted in accordance with the FDA's investigational device exemption, or IDE, regulations which govern investigational device labeling, prohibit promotion of the investigational device, and specify an array of recordkeeping, reporting and monitoring responsibilities of study sponsors and study investigators. If the device presents a ''significant risk'' to human health, the FDA requires the device sponsor to submit an IDE application to the FDA, which must be approved prior to commencing clinical trials. A significant risk device is one that presents a potential for serious risk to the health, safety or welfare of a patient and either is implanted, purported or represented to be used in supporting or sustaining human life, is for a use that is substantially important in diagnosing, curing, mitigating or treating disease or otherwise preventing impairment of human health, or otherwise presents a potential for serious risk to a subject.

An IDE supplement must be submitted to, and approved by, the FDA before a sponsor or investigator may make a change to the investigational plan that may affect its scientific soundness, study plan or the rights, safety or welfare of human subjects. In addition, the clinical trials must be approved by, and conducted under the oversight of, an Institutional Review Board, or IRB, for each clinical site. The IRB is responsible for the initial and continuing review of the IDE and may pose additional requirements for the conduct of the study. If an IDE application is approved by the FDA and one or more IRBs, clinical trials may begin at a specific number of investigational sites with a specific number of patients, as approved by the FDA. If the device is considered a ''non-significant risk,'' IDE submission to FDA is not required. Instead, only approval from the IRB overseeing the investigation at each clinical trial site is required.

Post-market Regulation

After a device is cleared or approved for marketing, numerous and pervasive regulatory requirements continue to apply. These include:

- establishment of registration and device listing with the FDA;

- QSR requirements, which require manufacturers and contract manufacturers, including any third-party manufacturers, to follow stringent design, testing, control, documentation and other quality assurance procedures during all aspects of the design and manufacturing process;
- labeling regulations and FDA prohibitions against the promotion of investigational products, or "off-label" uses of cleared or approved products;
- requirements related to promotional activities;
- clearance or approval of product modifications to 510(k)-cleared devices that could significantly affect safety or effectiveness or that would constitute a major change in intended use of a cleared device;
- medical device reporting regulations, which require that a manufacturer report to the FDA if a device it markets may have caused or contributed to a death or serious injury, or has malfunctioned and the device or a similar device that it markets would be likely to cause or contribute to a death or serious injury, if the malfunction were to recur;
- correction, removal and recall reporting regulations, which require that manufacturers report to the FDA field corrections, product removals or recalls if undertaken to reduce a risk to health posed by the device or to remedy a violation of the FDCA that may present a risk to health;
- the FDA's recall authority, whereby the agency can order device manufacturers to recall from the market a product that is in violation of governing laws and regulations; and
- post-market surveillance activities and regulations, which apply when deemed by the FDA to be necessary to protect the public health or to provide additional safety and effectiveness data for the device.

The FDA has broad regulatory compliance and enforcement powers. If the FDA determines that we failed to comply with applicable regulatory requirements, it can take a variety of compliance or enforcement actions, which may result in any of the following sanctions:

- untitled letters, warning letters, fines, injunctions, consent decrees and civil penalties;
- unanticipated expenditures to address or defend such actions;
- customer notifications for repair, replacement, refunds;
- recall, withdrawal, administrative detention or seizure;
- operating restrictions or partial suspension or total shutdown of production;
- refusal of or delay in granting our requests for 510(k) clearance or PMA approval of new tests or modified tests;
- operating restrictions, partial suspension or total shutdown of production;
- withdrawing 510(k) clearance or PMA approvals that are already granted;
- refusal to grant export approval; or
- criminal prosecution.

Laboratory-Developed Tests (LDTs)

LDTs have generally been considered to be tests that are designed, developed, validated and used within a single laboratory. The FDA takes the position that it has the authority to regulate such tests as medical devices under the FDCA. The FDA has historically exercised enforcement discretion and has not required clearance or approval of LDTs prior to marketing. In addition, the New York Clinical Laboratory Evaluation Program separately approves certain LDTs offered to New York State patients.

On October 3, 2014, the FDA issued two draft guidance documents regarding oversight of LDTs. These draft guidance documents proposed more active review of LDTs. The draft guidance documents have been the subject of considerable controversy, and in November 2016, the FDA announced that it would not be finalizing the 2014 draft guidance documents. On January 13, 2017, the FDA issued a discussion paper which laid out elements of a possible revised future LDT regulatory framework, but did not establish any regulatory requirements.

The FDA's efforts to regulate LDTs have prompted the drafting of legislation governing diagnostic products and services that sought to substantially revise the regulation of both LDTs and in vitro diagnostics, or IVDs. Congress may act to provide further direction to the FDA on the regulation of LDTs.

CLIA and State Laboratory Licensing

Under the Clinical Laboratory Improvement Amendments, or CLIA, a laboratory is any facility that performs laboratory testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease, or the impairment of or assessment of health. CLIA requires that a laboratory hold a certificate applicable to the type of laboratory examinations it performs and that it complies with, among other things, standards covering operations, personnel, facilities administration, quality systems and proficiency testing, which are intended to ensure, among other things, that clinical laboratory testing services are accurate, reliable and timely. We have a current CLIA certificate to perform our tests at our laboratories in Chicago, Illinois, Atlanta, Georgia and Raleigh, North Carolina. To renew our CLIA certificate, we are subject to survey and inspection every two years to assess compliance with program standards.

Laboratories performing high complexity testing are required to meet more stringent requirements than laboratories performing less complex tests. In addition, a laboratory that is certified as "high complexity" under CLIA may develop, manufacture, validate and use LDTs. CLIA requires analytical validation including accuracy, precision, specificity, sensitivity and establishment of a reference range for any LDT used in clinical testing. The regulatory and compliance standards applicable to the testing we perform may change over time and any such changes could have a material effect on our business.

CLIA provides that a state may adopt laboratory regulations that are more stringent than those under federal law, and a number of states have implemented their own more stringent laboratory regulatory requirements. State laws may require that nonresident laboratories, or out-of-state laboratories, maintain an in-state laboratory license to perform tests on samples from patients who reside in that state. As a condition of state licensure, these state laws may require that laboratory personnel meet certain qualifications, specify certain quality control procedures or facility requirements or prescribe record maintenance requirements**.**

Failure to comply with CLIA certification and state clinical laboratory licensure requirements may result in a range of enforcement actions, including certificate or license suspension, limitation, or revocation, directed plan of action, onsite monitoring, civil monetary penalties, criminal sanctions, and revocation of the laboratory's approval to receive Medicare and Medicaid payment for its services, as well as significant adverse publicity.

The College of American Pathologists, or CAP, maintains a clinical laboratory accreditation program. While not required to operate a CLIA-certified laboratory, many private insurers require CAP accreditation as a condition to contracting with clinical laboratories to cover their tests. In addition, some countries outside the United States require CAP accreditation as a condition to permitting clinical laboratories to test samples taken from their citizens. We have obtained CAP accreditation for our Chicago, Illinois and Atlanta, Georgia laboratories, and we expect to receive CAP accreditation for our Raleigh, North Carolina laboratory. In order to maintain CAP accreditation, we are subject to survey for compliance with CAP standards every two years. Failure to maintain CAP accreditation could have a material adverse effect on the sales of our tests and the results of our operations.

Federal and State Health Care Laws

Federal Physician Self-Referral Prohibition

We are also subject to the federal physician self-referral prohibition, commonly known as the Stark Law, and to comparable state laws. Together these restrictions generally prohibit us from billing a patient or governmental or private payer for certain designated health services, including clinical laboratory services, when the physician ordering the service, or a member of such physician's immediate family, has a financial relationship, such as an ownership or investment interest in or compensation arrangement, with us, unless the relationship meets an applicable exception to the prohibition. Several Stark Law exceptions are relevant to many common financial relationships involving clinical laboratories and referring physicians, including: (1) fair market value compensation for the provision of items or services; (2) payments by physicians to a laboratory for clinical laboratory services; (3) space and equipment rental arrangements that satisfy certain requirements and (4) personal services arrangements that satisfy certain requirements. The laboratory cannot submit claims to the Medicare Part B program for services furnished in violation of the Stark Law, and Medicaid reimbursements may be at risk as well. These prohibitions apply regardless of any intent by the parties to induce or reward referrals or the reasons for the financial relationship and the referral. Penalties for violating the Stark Law include significant civil, criminal and administrative penalties, such as the return of funds received for all prohibited referrals, fines, civil monetary penalties, exclusion from the federal healthcare programs, integrity oversight and reporting obligations, and imprisonment. In addition, knowing violations of the Stark Law may also serve as the basis for liability under the federal False Claims Act, or FCA, which can result in additional civil and criminal penalties.

Federal Anti-Kickback Law

The federal Anti-Kickback Statute, or AKS, makes it a felony for a person or entity, including a clinical laboratory, to knowingly and willfully offer, pay, solicit or receive any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, in order to induce business that is reimbursable under any federal health care program. The government may also assert that a claim that includes items or services resulting from a violation of the AKS constitutes a false or fraudulent claim under the FCA, which is discussed in greater detail below. Additionally, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. Although the AKS applies only to items and services reimbursable under any federal health care program, a number of states have passed statutes substantially similar to the AKS that apply to all payers. Penalties for violations of such state laws include imprisonment and significant monetary fines. Federal and state law enforcement authorities scrutinize arrangements between health care providers and potential referral sources to ensure that the arrangements are not designed as a mechanism to induce patient care referrals or induce the purchase or prescribing of particular products or services. Generally, courts have taken a broad interpretation of the scope of the AKS, holding that the statute may be violated if merely one purpose of a payment arrangement is to induce referrals or purchases. In addition to statutory exceptions to the AKS, regulations provide for a number of safe harbors. If an arrangement meets the provisions of an applicable exception or safe harbor, it is deemed not to violate the AKS. An arrangement must fully comply with each element of an applicable exception or safe harbor in order to qualify for protection. Failure to meet the requirements of the safe harbor, however, does not render an arrangement illegal. Rather, the government may evaluate such arrangements on a case-by-case basis, taking into account all facts and circumstances.

Other Health Care Laws

In addition to the requirements discussed above, several other health care fraud and abuse laws could have an effect on our business.

The FCA prohibits, among other things, a person from knowingly presenting, or causing to be presented, a false or fraudulent claim for payment or approval and from making, using, or causing to be made or used, a false record or statement material to a false or fraudulent claim in order to secure payment or retain an overpayment by the federal government. In addition to actions initiated by the government itself, the statute authorizes actions to

be brought on behalf of the federal government by a private party having knowledge of the alleged fraud. Because the complaint is initially filed under seal, the action may be pending for some time before the defendant is even aware of the action. If the government intervenes and is ultimately successful in obtaining redress in the matter or if the plaintiff succeeds in obtaining redress without the government's involvement, then the plaintiff will receive a percentage of the recovery. Finally, the Social Security Act includes its own provisions that prohibit the filing of false claims or submitting false statements in order to obtain payment. Several states have enacted comparable false claims laws which may be broader in scope and apply regardless of payer.

The Social Security Act includes civil monetary penalty provisions that impose penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. In addition, a person who offers or provides to a Medicare or Medicaid beneficiary any remuneration, including waivers of co-payments and deductible amounts (or any part thereof), that the person knows or should know is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of Medicare or Medicaid payable items or services may be liable under the civil monetary penalties statute. Moreover, in certain cases, providers who routinely waive copayments and deductibles for Medicare and Medicaid beneficiaries, for example, in connection with patient assistance programs, can also be held liable under the AKS and FCA. One of the statutory exceptions to the prohibition is non-routine, unadvertised waivers of copayments or deductible amounts based on individualized determinations of financial need or exhaustion of reasonable collection efforts. The Office of Inspector General of the HHS emphasizes, however, that this exception should only be used occasionally to address special financial needs of a particular patient.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created new federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payers, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Like the AKS, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

The Eliminating Kickbacks in Recovery Act of 2018, or EKRA, prohibits knowingly and willfully soliciting or receiving any remuneration (including any kickback, bribe or rebate) directly or indirectly, overtly or covertly, in cash or in kind, in return for referring a patient or patronage to a laboratory; or paying or offering any remuneration (including any kickback, bribe or rebate) directly or indirectly, overtly or covertly, in cash or in kind, to induce a referral of an individual to a laboratory or in exchange for an individual using the services of that laboratory. EKRA was enacted to help reduce opioid-related fraud and abuse. However, EKRA defines the term "laboratory" broadly and without reference to any connection to substance use disorder treatment. The EKRA applies to all payers including commercial payers and government payers. Violations of EKRA are subject to significant fines and/or up to ten years in jail, separate and apart from existing AKS regulations and penalties. The law includes a limited number of exceptions, some of which closely align with corresponding AKS exceptions and safe harbors, and others that materially differ. Currently, there is no regulation interpreting or implementing EKRA, nor any guidance released by a federal agency regarding the scope of EKRA.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, impose obligations on "covered entities," including certain healthcare providers, health plans, and healthcare clearinghouses, as well as their respective "business associates" that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity, with respect to safeguarding the privacy, security and transmission of individually identifiable health information. Additionally, HITECH created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in U.S. federal courts to enforce HIPAA and seek attorneys' fees and costs associated with pursuing federal civil actions.

The Physician Payments Sunshine Act, enacted as part of the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or the ACA, also imposed annual reporting requirements on manufacturers of certain devices, drugs and biologics for payments and other transfers of value by them during the previous year to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by such physicians and their immediate family members. Beginning in 2022, applicable manufacturers are required in certain circumstances to report such information regarding their payments and other transfers of value to physician assistants, nurse practitioners, clinical nurse specialists, anesthesiologist assistants, certified registered nurse anesthetists and certified nurse midwives during the previous year.

Also, many states have laws similar to those listed above that may be broader in scope and may apply regardless of payer.

Efforts to ensure that our internal operations and business arrangements with third parties comply with applicable laws and regulations involve substantial costs. Any action brought against us for violation of these or other laws or regulations, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Additionally, certain of our business practices, including our consulting and advisory board arrangements with physicians and other healthcare providers, a small number of whom may receive stock or restricted stock units as compensation for services provided, may not comply with current or future corporate practice of medicine statutes, regulations, agency guidance or case law. If our operations are found to be in violation of any of the fraud and abuse laws described above or any other laws that apply to us, we may be subject to penalties, including potentially significant criminal, civil and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government healthcare programs, contractual damages, reputational harm, integrity oversight and reporting obligations, limitations to the sale of certain products or services, diminished profits and future earnings, and the curtailment or restructuring of our operations.

Data Privacy and Security

We are, or may become, subject to numerous federal, state, local and foreign laws, regulations, standards, and guidance regarding data privacy and security. For example, HIPAA, as mentioned above, imposes privacy, security and breach reporting obligations with respect to individually identifiable health information upon "covered entities" (health plans, health care clearinghouses and certain health care providers), and their respective business associates, individuals or entities that create, received, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HIPAA mandates the reporting of certain breaches of health information to the U.S. Department of Health and Human Services, or HHS, affected individuals and if the breach is large enough, the media. Entities that are found to be in violation of HIPAA, including as the result of a breach of unsecured PHI, a complaint about privacy practices or an audit by HHS, may be subject to significant civil, criminal and administrative fines and penalties and/or additional reporting and oversight obligations if required to enter into a resolution agreement and corrective action plan with HHS to settle allegations of HIPAA non-compliance.

Even when HIPAA does not apply, failing to take appropriate steps to keep consumers' personal information secure may constitute unfair acts or practices in or affecting commerce in violation of Section 5(a) of the Federal Trade Commission Act, 15 U.S.C § 45(a). The FTC expects a company's data security measures to be reasonable and appropriate in light of the sensitivity and volume of consumer information it holds, the size and complexity of its business, and the cost of available tools to improve security and reduce vulnerabilities. Personally identifiable health information is considered sensitive data that merits stronger safeguards. The FTC's guidance for appropriately securing consumers' personal information is similar to what is required by the HIPAA Security Rule. In addition, certain state laws govern the privacy and security of personal information, including health information in certain circumstances, some of which are more stringent than HIPAA and many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. Failure or perceived

failure to comply with these laws, where applicable, can result in material adverse effects to our business, including the imposition of significant civil and/or criminal penalties and private litigation.

The California Consumer Privacy Act, or CCPA, which went into effect January 1, 2020, is an example of the increasingly stringent privacy laws at the state level in the United States. The CCPA, among other things, imposes several obligations on covered companies, including requiring specific disclosures related to a business's collection, use and sharing of personal information and requirements to respond to requests related to their personal information (e.g. requests to understand personal information collection practices, to delete personal information, and to opt out of certain disclosures of their information). The CCPA also created a private right of action with statutory damages for certain data breaches, thereby potentially increasing risks associated with a data breach.

Additionally, in November 2020, California voters passed the California Privacy Rights Act of 2020, or CPRA. The CPRA, which went into effect on January 1, 2023 and creates additional obligations with respect to certain data relating to consumers, significantly expands the CCPA, including by introducing additional obligations such as data minimization and storage limitations, granting additional rights to consumers, such as correction of personal information and additional opt-out rights, and creates a new entity, the California Privacy Protection Agency, to implement and enforce the law. The CCPA and CPRA may increase our compliance costs and potential liability. In addition to the CCPA, numerous other states' legislatures have passed or are considering similar laws that will require ongoing compliance efforts and investment. For example, Virginia passed the Virginia Consumer Data Protection Act, and Colorado passed the Colorado Privacy Act, both of which differ from the CPRA and became effective in 2023.

Outside the United States, there are an increasing number of laws and regulations governing the collection, use and processing of personal data. For example, the European Union's General Data Protection Regulation, or EU GDPR applies to any company established in the European Economic Area, or EEA, and to companies established outside the EEA that process personal information in connection with the offering of goods or services to data subjects in the EEA or the monitoring of the behavior of data subjects in the EEA. These regulations are often more restrictive than those in the United States and may restrict transfers of personal data from the EEA to the United States and other countries unless certain requirements are met. The EU GDPR provides that EU member states may make their own further laws and regulations limiting the processing of genetic, biometric or health data, which could limit our ability to use and share personal data or could cause our costs to increase, and harm our business and financial condition. Further, the United Kingdom's decision to leave the European Union has created uncertainty with regard to data protection regulation in the United Kingdom. As of January 1, 2021, we are also subject to the UK General Data Protection Regulation and UK Data Protection Act of 2018, which retains the GDPR in substantially similar form in the United Kingdom's national law. Failure to comply with any of these obligations could expose us to material adverse effects, including significant fines.

For more information regarding risks relating to data privacy and security, see "Risk Factors – Risks related to our highly regulated industry – Our collection, processing, use and disclosure of personally identifiable information, including patient and employee information, is subject to privacy and security regulations, and our failure to comply with those regulations or to adequately secure the information in our possession could result in significant liability or reputational harm."

Health Reform

In March 2010, the ACA became law. This law substantially changed the way health care is financed by both commercial payers and government payers, and significantly impacted our industry. The ACA contains a number of provisions that impacted existing state and federal healthcare programs or result in the development of new programs, including those governing enrollments in state and federal healthcare programs, reimbursement changes and fraud and abuse.

Since its enactment, there have been efforts to repeal all or part of the ACA. For example, on June 17, 2021 the U.S. Supreme Court dismissed a challenge on procedural grounds that argued the ACA is unconstitutional in

its entirety because the "individual mandate" was repealed by Congress. Thus, the ACA will remain in effect in its current form. Further, prior to the U.S. Supreme Court ruling on January 28, 2021, President Biden issued an executive order that initiated a special enrollment period for purposes of obtaining health insurance coverage through the ACA marketplace, which began on February 15, 2021 and remained open through August 15, 2021. The executive order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. It is possible that other challenges to the ACA will be made in the future. It is unclear how any such challenges and litigation, and the healthcare reform measures of the Biden administration will impact the ACA.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. On August 2, 2011, the Budget Control Act of 2011 was signed into law, which, among other things, reduced Medicare payments to providers by 2% per fiscal year, effective on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030, with a temporary suspension from May 1, 2020 through December 31, 2021 due to the COVID-19 pandemic, unless additional Congressional action is taken.

We expect that additional state, federal, and foreign healthcare reform measures will be adopted in the future. It is also possible that additional governmental action will be taken in response to the COVID-19 pandemic.

Coverage and Reimbursement

The availability and extent of reimbursement by governmental and private payers is essential for most patients to be able to afford our current and future diagnostic products. Each payer makes its own decision as to whether to provide coverage for our tests, whether to enter into a contract with us and the reimbursement rate for a test. Coverage determinations by a payer may depend on a number of factors, including but not limited to a payer's determination that a test is appropriate, medically necessary or cost-effective. Negotiating with payers is time-consuming, and payers often insist on their standard form contracts, which may allow payers to terminate coverage on short notice, impose significant obligations on us and create additional regulatory and compliance hurdles for us. Further, when we contract with a payer as a participating provider, reimbursements by the payer are generally made pursuant to a negotiated fee schedule and are limited to only covered indications or where prior approval has been obtained. Becoming a participating provider can result in higher reimbursement amounts for covered uses of our tests and, potentially, no reimbursement for non-covered uses identified under the payer's policies or the contract.

Although we are a participating provider with several commercial payers, some large commercial payers have issued non-coverage policies that consider tissue and liquid comprehensive genomic profile testing, including certain of our Genomics tests, as experimental or investigational.

In the United States, many significant decisions about reimbursement for new diagnostics are made by the Centers for Medicare & Medicaid Services, or CMS, which makes a national coverage determination, or NCD, as to whether and to what extent a new diagnostic will be covered and reimbursed under Medicare, although it frequently delegates this authority to local Medicare Administrative Contractors, or MACs, which may make a local coverage determination, or LCD, with respect to coverage and reimbursement. Private payers tend to follow Medicare to a substantial degree. During the year ended December 31, 2022, Medicare claims represented 28% of our clinical testing volume. Given we operate laboratories in multiple MACs and run both LDTs and an FDA-approved assay, the applicable reimbursement determination varies based on the assay being run and the locations where it is being processed. The rules and standards that CMS uses to determine reimbursement rates for our tests are frequently changing and subject to revision, which could have a material impact on our results.

For example, Medicare's NCD for NGS, first established in 2018 and subsequently updated in 2020, states that NGS oncology tests (such as our Tempus xT and Tempus xF tests), would be covered by Medicare nationally if and when: (1) performed in a CLIA-certified laboratory, (2) ordered by a treating physician, (3) the

patient meets certain clinical and treatment criteria, including having recurrent, relapsed, refractory, metastatic, or advanced stages III or IV cancer, (4) the test is approved or cleared by the FDA as a companion in vitro diagnostic for an FDA approved or cleared indication for use in that patient's cancer, and (5) results are provided to the treating physician for management of the patient using a report template to specify treatment options. We believe that our xT CDX assay, which received FDA approval in April 2023, will meet the criteria for reimbursement under the NCD. The NGS NCD also states that each MAC may provide local coverage of other NGS tests for cancer patients only when the test is performed by a CLIA-certified laboratory, ordered by a treating physician and the patient meets the same clinical and treatment criteria required of nationally covered NGS tests under the NGS NCD. An NGS typically test is not covered by Medicare when cancer patients do not have the above-noted indications for cancer under either an NCD or LCD.

National Government Services, Inc. is the local MAC that makes local coverage determinations, or LCDs, for tests conducted at our Chicago laboratory. The Local MAC has issued two LCDs related to genetic testing in cancer, each of which currently requires claims to be submitted under a single CPT code that describes the test. Because no CPT code comprehensively describes our NGS oncology tests, we have historically submitted claims using individual codes based on the cancer subtype profiled. On March 25, 2021, the Local MAC instructed us to submit our claims using a different designated CPT code and indicated that such claims would be individually reviewed. In addition to claims submitted after the March 25, 2021 guidance, on July 23, 2021, the Local MAC issued revised instructions for CPT coding, which may be applicable to our NGS oncology tests performed after the date of the revised guidance, and further updated those instructions on July 29, 2021. We have sought additional clarification on this guidance from the Local MAC in order to understand its impact on our coding procedures. We are also attempting to assess the impact of this updated guidance on the payments we may receive for Medicare claims submitted to the Local MAC. Claims submitted under the March 2021 and July 2021 guidance were summarily denied and we are in the process of appealing these denials, but the process is typically slow and costly, and multiple levels of appeal may be required for adjudication of outstanding claims.

On February 10, 2022, the Local MAC issued a revised LCD (L37810), and a corresponding Billing and Coding update (A56867). The increased scope of coverage provided for in the revised LCD will result in the CPT code they instructed us to begin billing in July 2021 being reimbursed at the prevailing Medicare rate for those tests which meet the revised coverage criteria. The modified LCD is effective April 1, 2022 and applies to genomic sequence analysis panel tests in the treatment of solid tumors, which primarily impacts our solid tumor assay, xT, given the modified scope of coverage in the revised LCD. We continue to monitor the impact the LCD has on the claims currently in the appeal process. Initial indications suggest that the LCD has generally had a favorable impact on reimbursement for claims submitted after April 1, 2022.

Beginning January 1, 2023, a new CPT code went into effect covering full transcriptome testing when performed separately from DNA testing. Historically, our xT assay was actually comprised of two separate and distinct procedures, DNA and RNA. Given there was not an applicable CPT code for RNA, we did not bill that test. With the introduction of the new code, we now have two separate assays, one analyzing DNA – xT and one analyzing RNA – xR that are ordered and billed for separately. We requested that the Local MAC add the new CPT code to the LCD, which they did effective January 1, 2023.

Palmettto is the MAC jurisdiction that determines reimbursement for tests conducted at our Raleigh and Atlanta laboratories through the MolDx program. MolDx requires laboratories to complete a technical assessment process in order to secure reimbursement for tests run at labs in its jurisdiction. Upon receiving approval in the technical assessment process, assays are assigned a z-code and a price at which MolDx will reimburse claims. In conjunction with launching our Raleigh laboratory, we submitted a technical assessment for our xT assay in 2022 and our xF assay in 2023. We received approval on our xT assay in October 2023 and are awaiting feedback on our xF submission.

In addition, pursuant to the regulations of CMS, we cannot bill Medicare directly for tests provided for Medicare beneficiaries in some situations. CMS adopted an exception to its laboratory date of service regulation,

and if certain conditions are met, molecular testing laboratories such as us can rely on that exception to bill Medicare directly, instead of seeking payment from the hospital. If this exception is repealed or curtailed by CMS, or its laboratory date of service regulation is otherwise changed to adversely impact our ability to bill Medicare directly, our revenue could be materially reduced.

Furthermore, on September 27, 2023, the Centers for Medicare and Medicaid Services (CMS) published calendar year 2024 preliminary payment determinations for new and reconsidered codes on the Medicare clinical laboratory fee schedule (CLFS), including codes that may apply to tests we offer through our Genomics business. In doing so, CMS rejected the recommendations from experts on the Clinical Diagnostic Laboratory Test (CDLT) Advisory Panel and recommended reimbursement rates for several new procedure codes describing genomic profiling tests that are substantially below our costs to perform them. If CMS fails to revise its preliminary determination after a review and comment period, it may have a significant negative impact on our financial results. We expect a final determination from CMS in November. If CMS fails to revist its preliminary determination after and comment period, or makes other changes to applicable reimbursement rates, it may have a significant impact on financial results.

Some payers have implemented, or are in the process of implementing, laboratory benefit management programs, often using third-party benefit managers to manage these programs. The stated goals of these programs are to help improve the quality of outpatient laboratory services, support evidence-based guidelines for patient care and lower costs. The impact on laboratories, such as us, of active laboratory benefit management by third parties is unclear, and we expect that it would have a negative impact on our revenue in the short term. Payers may resist reimbursement for our tests in favor of less expensive tests, require pre-authorization for our tests, or impose additional pricing pressure on and substantial administrative burden for reimbursement for our tests. We expect to continue to focus substantial resources on increasing adoption of, and coverage and reimbursement for, our current tests and any future tests we may develop. We believe it may take several years to achieve broad coverage and adequate contracted reimbursement with a majority of payers for our tests. However, we cannot predict whether, under what circumstances, or at what price levels payers will cover and reimburse our tests.

Outside the United States, the reimbursement process and timelines vary significantly. Certain countries, including a number of member states of the European Union, set prices and make reimbursement decisions for diagnostic products, with limited participation from the marketing authorization or CE mark holders, or may take decisions that are unfavorable to the authorization or CE mark holder where they have participated in the process. There can be no assurance that we can achieve acceptable prices and reimbursement decisions.

Legal Proceedings

From time to time, we are involved in various legal proceedings arising from the normal course of business activities. We are not presently a party to any litigation the outcome of which, we believe, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, cash flows or financial condition. Defending such proceedings is costly and can impose a significant burden on management and employees. The results of any current or future litigation cannot be predicted with certainty, and regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources, and other factors.

Although no formal legal proceeding has been instituted, from time to time, we receive requests from governmental agencies, or third parties working on their behalf, for documents and information related to our products and services. For example, on May 19, 2022, Tempus received a subpoena from the Office of the Ohio Attorney General. The subpoena required production of certain billing and patient records associated with nine Ohio Medicaid patients who received Tempus clinical diagnostic tests between 2019 and 2022. Tempus provided responsive documents in June 2022 and has not received additional inquiry since that time. Similarly, we have received requests for medical records and billing information from certain Unified Program Integrity Coordinators regarding clinical diagnostic services provided by Tempus to patients enrolled in the Medicare and Medicaid programs. We have responded to all such requests for information.

Facilities

Our headquarters is located in Chicago, Illinois, where we lease approximately 180,000 square feet of laboratory and office space pursuant to a lease that expires in February 2029. We also lease an aggregate of approximately 25,000 square feet of laboratory and office space in Atlanta, Georgia pursuant to two leases that expire in September 2024 and September 2025, respectively. Our CLIA-certified laboratories are located in these facilities. We also have a new genomics lab in Raleigh, North Carolina, which became operational in 2022 and from which we began offering commercial laboratory tests in the second half of 2022. We also have offices in New York, New York and Redwood City, California. We do not own any real property. While we believe our existing facilities are adequate to meet our current requirements, we expect to expand our facilities as our operations grow over time. We believe we will be able to obtain such additional space on acceptable and commercially reasonable terms.

Employees and Human Capital

As of September 30, 2023, we had more than 2,000 employees, of which 729 were technical and were engaged in product and engineering, and research and development. As of September 30, 2023, 965 employees were based at our headquarters in Chicago, Illinois, 79 employees were based in Atlanta, Georgia, and 107 employees were based in Raleigh, North Carolina. None of our employees are represented by a labor union or covered under a collective bargaining agreement, and we have never experienced a work stoppage. We consider our relationship with our employees to be positive.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and additional employees. The principal purposes of our equity and other incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

MANAGEMENT

The following sets forth information, as of September 30, 2023, regarding our current executive officers and directors:

Name	Age	Position
Executive Officers:		
Eric Lefkofsky	54	Chief Executive Officer, Founder and Director
Ryan Fukushima	38	Chief Operating Officer
Erik Phelps	53	Executive Vice President and Chief Administrative and Legal Officer
James Rogers	38	Chief Financial Officer
Non-Employee Directors:		
Peter J. Barris	71	Director
Eric D. Belcher	55	Director
Jennifer A. Doudna, Ph.D.	59	Director
Wayne A.I. Frederick, M.D.	52	Director
Robert Ghenchev	40	Director
Scott Gottlieb, M.D.	51	Director
Theodore J. Leonsis	66	Director
Nadja West, M.D.	62	Director

Executive Officers

Eric Lefkofsky is our Founder and has served as our Chief Executive Officer and a member of our board of directors since our inception. Before founding Tempus, Mr. Lefkofsky co-founded Groupon, Inc. in 2008, where he held various roles, including Executive Chairman (through August 2013), Chief Executive Officer (August 2013 to November 2015), and Chairman of the board of directors (November 2015 to June 2020). Mr. Lefkofsky also co-founded Lightbank LLC in 2008, a private venture capital firm specializing in investments in technology companies, and has served as its managing member since inception. Mr. Lefkofsky also co-founded InnerWorkings, Inc., Mediaocean, LLC, Echo Global Logistics, Inc., and Pathos AI, Inc., and served on each company's board of directors or board of managers. Mr. Lefkofsky holds a bachelor's degree from the University of Michigan and a J.D. from the University of Michigan Law School. We believe that Mr. Lefkofsky is qualified to serve on our board of directors because of his perspective and experience as our Founder and Chief Executive Officer, and his extensive knowledge of the venture capital and technology industries.

Ryan Fukushima has served as our Chief Operating Officer since September 2015. Prior to joining us, Mr. Fukushima was an Entrepreneur-in-Residence and Vice President at Lightbank LLC, a private venture capital firm specializing in investments in technology companies, from February 2014 to September 2015, and currently serves as a co-founder and interim CEO of Pathos AI, Inc. Mr. Fukushima holds a B.S. from California Polytechnic University and a M.B.A. from the Ross School of Business at the University of Michigan.

Erik Phelps has served as our Executive Vice President and Chief Administrative and Legal Officer since June 2020. Prior to this, Mr. Phelps served as our Executive Vice President and General Counsel from March 2017 to June 2020. Prior to joining us, Mr. Phelps served as the General Counsel at Epic Systems Corporation, a software company that provides electronic health records for medical groups, hospitals and healthcare organizations, from May 2013 to March 2017. Mr. Phelps holds a B.A. from Beloit College and a J.D. from the George Washington University Law School.

James Rogers has served as our Chief Financial Officer since April 2021. Prior to this, Mr. Rogers served as our Vice President of Finance from February 2020 to April 2021, as our Senior Director of Finance from February 2018 to February 2020, and as our Director of Finance from August 2017 to February 2018. Prior to joining us, Mr. Rogers held various finance positions at Groupon from April 2011 to August 2017, including most recently leading financial planning and analysis for its North America business from February 2017 to August 2017 and serving as the financial controller of Asia Pacific operations from January 2015 to January 2017. Mr. Rogers holds a B.B.A. from the University of Notre Dame and an M.S. from Northern Illinois University.

Non-Employee Directors

Peter J. Barris has served as a member of our board of directors since September 2017. Mr. Barris has also served on the boards of directors of Berkshire Grey, Inc. since April 2016, Sprout Social, Inc. since February 2011 and Groupon since January 2008. Mr. Barris joined New Enterprise Associates, Inc., or NEA, a global venture capital fund investing in technology and healthcare, where he specialized in information technology investing, in 1992 and retired at the end of 2019. Prior to his retirement, Mr. Barris held several roles at NEA, including Managing General Partner from 1999 to 2017. After retiring in 2019, Mr. Barris now serves as Chairman of NEA. Mr. Barris holds a B.S. from Northwestern University and an M.B.A. from the Tuck School of Business at Dartmouth University. We believe that Mr. Barris is qualified to serve on our board of directors because of his investment management and financial expertise, and his experience serving on public company boards.

Eric D. Belcher has served as a member of our board of directors since January 2019. Mr. Belcher has served as the Chief Executive Officer of Market Track, LLC (d/b/a Numerator), a data and technology company in the market research industry, since June 2019. Mr. Belcher has also held various positions at InnerWorkings, Inc. since May 2005, including most recently serving as its Chief Executive Officer and President from January 2009 to April 2018. Mr. Belcher served as a member of the board of directors of InnerWorkings, Inc. from January 2009 to December 2018, including as the Chairman of its board of directors from April 2018 to September 2018. Mr. Belcher holds a bachelor's degree from Bucknell University and an M.B.A. from the University of Chicago Booth School of Business. We believe that Mr. Belcher is qualified to serve on our board of directors because of his extensive experience in the technology industry and leading high growth companies.

Jennifer A. Doudna, Ph.D. has served as a member of our board of directors since April 2021. Dr. Doudna has also served on the board of directors of Johnson & Johnson since April 2018. Since July 2002, Dr. Doudna has served as a Professor of Biochemistry & Molecular Biology at the University of California, Berkeley, where she directs the Innovative Genomics Institute, a joint UC Berkeley-UC San Francisco center, holds the Li Ka Shing Chancellor's Professorship in Biomedical and Health, and is the Chair of the Chancellor's Advisory Committee on Biology. Since 2002, Dr. Doudna has served as Principal Investigator at the Doudna Lab at UC Berkeley. Dr. Doudna has founded and served on the Scientific Advisory Boards of Caribou Biosciences, Inc. and Intellia Therapeutics, Inc., each of which are leading CRISPR genome engineering companies, since 2010. She has also been an Investigator with the Howard Hughes Medical Institute since 1997. Dr. Doudna is the recipient of numerous scientific awards in biochemistry and genetics, including the Nobel Prize in Chemistry in 2020. Dr. Doudna holds a bachelor's degree from Pomona College and a Ph.D. from Harvard Medical School. We believe that Dr. Doudna is qualified to serve on our board of directors because of her expertise in scientific research and innovation.

Wayne A.I. Frederick, M.D. has served as a member of our board of directors since October 2020. Dr. Frederick has served on the boards of directors of several other public companies, including serving as a member of the board of directors of Insulet Corp since October 2020, Forma Therapeutics Holdings, Inc. since July 2020, and Humana Inc. since February 2020. He also serves on the boards of directors of privately held companies and charitable organizations. Dr. Frederick is the President of Howard University, having held this position since July 2014, and also serves as the Charles R. Drew Endowed Chair of Surgery at Howard

University's College of Medicine. Dr. Frederick holds a B.S./M.D. dual degree, and an M.B.A. from Howard University. We believe that Dr. Frederick is qualified to serve on our board of directors because of his vast experience in medical research, healthcare academics and business administration, and his service on the boards of multiple public companies.

Robert Ghenchev has served as a member of our board of directors since May 2019 and is currently employed as Senior Partner at Novo Holdings Equity US Inc. which provides consulting services to Novo Holdings A/S. Since January 2018, Mr. Ghenchev has also served as Head of Novo Growth at Novo Holdings A/S. Prior to joining Novo Holdings, Mr. Ghenchev served as a Senior Vice President at Moelis & Company in London where he focused on mergers and acquisitions within the healthcare industry, from April 2010 to January 2018. Mr. Ghenchev also serves on the boards of directors of a European public company and other private companies. Mr. Ghenchev holds a B.A. in Economics and Finance from McGill University and an M.Sc. in Financial Economics from the University of Oxford. We believe that Mr. Ghenchev is qualified to serve on our board of directors because of his expertise in finance and the healthcare industry.

Scott Gottlieb, M.D. has served as a member of our board of directors since October 2019. Dr. Gottlieb has also served on the boards of directors of Illumina, Inc. since February 2020 and Pfizer Inc. since June 2019. Dr. Gottlieb has served as a Special Partner on NEA's healthcare investment team since April 2019, and a Resident Fellow at American Enterprise Institute since April 2021. Prior to that, he served as the 23rd Commissioner of the U.S. Food and Drug Administration from May 2017 to April 2019. Prior to serving as Commissioner, Dr. Gottlieb held several roles in the public and private sectors, including serving as a Venture Partner at NEA from January 2007 to May 2017, and a senior advisor to the Administrator of the Centers for Medicare and Medicaid Services in 2004. He is presently a contributor to CNBC and the CBS News program Face the Nation. Dr. Gottlieb holds a B.A. from Wesleyan University and an M.D. from Mount Sinai School of Medicine. We believe that Dr. Gottlieb is qualified to serve on our board of directors because of his extensive experience as a medical policy expert and public health advocate.

Theodore J. Leonsis has served as a member of our board of directors since January 2019. In November 2011, Mr. Leonsis co-founded Revolution Growth, a private investment firm, and has served as a General Partner thereof since that time. Since 1999, Mr. Leonsis has served as the Founder, Chairman, Majority Owner, and Chief Executive Officer of Monumental Sports & Entertainment, LLC, a sports, entertainment, media, and technology company that owns the NBA's Washington Wizards, the NHL's Washington Capitals, the WNBA's Washington Mystics, the Capital City Go-Go, Wizards District Gaming, Caps Gaming, and the Capital One Arena in Washington, D.C. Mr. Leonsis has served as a director of American Express Co. since July 2010. Mr. Leonsis has also served on the board of directors of Groupon, Inc. since June 2009, including as Chairman of the board of directors from August 2013 to November 2015 and, again, since June 2020. Mr. Leonsis also serves on the boards of directors of several private internet and technology companies, as well as charitable organizations. Mr. Leonsis holds a bachelor's degree from Georgetown University. We believe that Mr. Leonsis is qualified to serve on our board of directors because of his significant operational, investment and financial experience, and his service on the boards of two public companies.

Nadja West, M.D. has served as a member of our board of directors since April 2021. Dr. West has also served on the boards of directors of several other public companies, including serving as a member of the board of directors of Johnson & Johnson since December 2020, Tenet Healthcare Corp since October 2019, and Nucor Corporation since September 2019. From December 2015 to October 2019, Dr. West served as the 44th Surgeon General of the U.S. Army, and the Commanding General of the U.S. Army Medical Command. Dr. West currently serves as Trustee of both the National Recreation Foundation and Mount St. Mary's University, and board member of Americares and The Woodruff Foundation. She was recently appointed an independent member of the NCAA Board of Governors. Dr. West holds a B.S. from the United States Military Academy at West Point, an M.D. from the George Washington University School of Medicine, and an M.S. from National War College. We believe that Dr. West is qualified to serve on our board of directors because of her executive and operational leadership and expertise with strategic planning and healthcare management.

Composition of Our Board of Directors

Our business and affairs are managed under the direction of our board of directors. We currently have nine directors. Each director is elected to the board of directors for a one-year term, to serve until the election and qualification of a successor director at our annual meeting of stockholders, or until the director's earlier removal, resignation, or death. All of our directors currently serve on the board of directors pursuant to the provisions of a voting agreement between us and several of our stockholders. This agreement will terminate upon the closing of this offering, after which there will be no further contractual obligations regarding the election of our directors. Following the closing of this offering, no stockholder will have any special rights regarding the election or designation of members of our board of directors. Our current directors will continue to serve as directors until their resignation, removal or successor is duly elected.

Director Independence

Our board of directors has undertaken a review of the independence of each director. Based on information provided by each director concerning his or her background, employment and affiliations, our board of directors has determined that none of our directors, other than Mr. Lefkofsky, has any relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the listing standards of the Nasdaq Stock Market. In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our shares by each non-employee director and the transactions described in the section titled "Certain Relationships and Related Party Transactions."

Committees of Our Board of Directors

Our board of directors has established an audit committee, a compensation committee, a nominating and corporate governance committee and an executive committee. The composition and responsibilities of each of the committees of our board of directors are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors. Our board of directors may establish other committees as it deems necessary or appropriate from time to time.

Audit Committee

After this offering, our audit committee will consist of Eric D. Belcher, Peter J. Barris and Wayne A.I. Frederick. Our board of directors has determined that each of Messrs. Belcher, Barris and Frederick satisfies the independence requirements under the Nasdaq Stock Market listing standards and Rule 10A-3(b)(1) of the Exchange Act. The chair of our audit committee will be Mr. Belcher, who our board of directors has determined is an "audit committee financial expert" within the meaning of SEC regulations. Each member of our audit committee can read and understand fundamental financial statements in accordance with applicable requirements. In arriving at these determinations, our board of directors has examined each audit committee member's scope of experience and the nature of their employment in the corporate finance sector.

The principal duties and responsibilities of our audit committee include, among other things:

- selecting a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- helping to ensure the independence and performance of the independent registered public accounting firm;
- helping to maintain and foster an open avenue of communication between management and the independent registered public accounting firm;

- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing our policies on risk assessment and risk management;
- reviewing related party transactions;
- obtaining and reviewing a report by the independent registered public accounting firm at least annually, that describes its internal quality-control procedures, any material issues with such procedures, and any steps taken to deal with such issues when required by applicable law; and
- approving (or, as permitted, pre-approving) all audit and all permissible non-audit services to be performed by the independent registered public accounting firm.

Our audit committee will operate under a written charter, to be effective prior to the closing of this offering, that satisfies the applicable listing standards of the Nasdaq Stock Market.

Compensation Committee

After this offering, our compensation committee will consist of Peter J. Barris and Nadja West. The chair of our compensation committee will be Mr. Barris. Our board of directors has determined that each of Mr. Barris and Ms. West is independent under Nasdaq listing standards and a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act.

The principal duties and responsibilities of our compensation committee include, among other things:

- approving the retention of compensation consultants and outside service providers and advisors;
- reviewing and approving, or recommending that our board of directors approve, the compensation, individual and corporate performance goals and objectives and other terms of employment of our executive officers, including evaluating the performance of our chief executive officer and, with his assistance, that of our other executive officers;
- reviewing and recommending to our board of directors the compensation of our directors;
- administering our equity and non-equity incentive plans;
- reviewing our practices and policies of employee compensation as they relate to risk management and risk-taking incentives;
- reviewing and evaluating succession plans for the executive officers;
- reviewing and approving, or recommending that our board of directors approve, incentive compensation and equity plans; and
- reviewing and establishing general policies relating to compensation and benefits of our employees and reviewing our overall compensation philosophy.

Our compensation committee will operate under a written charter, to be effective prior to the closing of this offering, that satisfies the applicable listing standards of the Nasdaq Stock Market.

Nominating and Corporate Governance Committee

After this offering, our nominating and corporate governance committee will consist of Theodore J. Leonsis, Jennifer A. Doudna and Scott Gottlieb. The chair of our nominating and corporate governance committee will be

Mr. Leonsis. Our board of directors has determined that each member of the nominating and corporate governance committee is independent under the applicable listing standards of the Nasdaq Stock Market. In addition, Mr. Lefkofsky will serve as an observer on our nominating and corporate governance committee.

The nominating and corporate governance committee's responsibilities include, among other things:

- identifying, evaluating, and selecting, or recommending that our board of directors approve, nominees for election to our board of directors and its committees;
- approving the retention of director search firms;
- evaluating the performance of our board of directors and of individual directors;
- considering and making recommendations to our board of directors regarding the composition of our board of directors and its committees;
- evaluating the adequacy of our corporate governance practices and reporting; and
- overseeing an annual evaluation of the board's performance.

Our nominating and corporate governance committee will operate under a written charter, to be effective prior to the closing of this offering, that satisfies the applicable listing standards of the Nasdaq Stock Market.

Executive Committee

Our board of directors has established an executive committee comprised of Peter J. Barris, Theodore J. Leonsis and Eric Lefkofsky. The executive committee was formed to facilitate approval of certain corporate actions in the intervals between full meetings of the board. The executive committee has the authority to exercise the power and authority of the board, except with respect to matters which, under the Delaware General Corporation Law or the rules and regulations of the Nasdaq Stock Market, cannot be delegated by the board of directors to a committee.

Code of Conduct

We have adopted a Code of Conduct that applies to all our employees, officers and directors. This includes our principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions. The full text of our Code of Conduct will be posted on our website at www.tempus.com. We intend to disclose on our website any future amendments of our Code of Conduct or waivers that exempt any principal executive officer, principal financial officer, principal accounting officer or controller, persons performing similar functions or our directors from provisions in the Code of Conduct. Information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider information on our website to be part of this prospectus.

Compensation Committee Interlocks and Insider Participation

None of the members of the compensation committee are currently, or have been at any time, one of our officers or employees. None of our executive officers currently serve, or have served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Non-Employee Director Compensation

The following table sets forth information regarding compensation earned by or paid to our non-employee directors for the year ended December 31, 2022:

Name	Fees Earned or Paid in Cash	Stock Awards(1) (2)	Total
Peter J. Barris	$ —	$ —	$ —
Eric D. Belcher	—	—	—
Jennifer A. Doudna, Ph.D.(3)	93,750	800,500	894,250
Wayne A.I. Frederick, M.D.	93,750	800,500	894,250
Robert Ghenchev	—	—	—
Scott Gottlieb, M.D.	125,000	2,376,500(4)	2,501,500
Theodore J. Leonsis	—	—	—
Nadja West, M.D.(5)	93,750	800,500	894,250

(1) Amounts reported represent the aggregate grant date fair value of RSUs granted to our directors during 2021 under our 2015 Plan, computed in accordance with Financial Accounting Standard Board Accounting Standards Codification, Topic 718, or ASC Topic 718. The assumptions used in calculating the grant date fair value of the stock awards reported in this column are set forth in the notes to our audited consolidated financial statements included elsewhere in this prospectus. This amount does not reflect the actual economic value that may be realized by the non-employee director.

(2) As of December 31, 2022, the aggregate number of shares underlying outstanding RSUs under our 2015 Plan held by each of our non-employee directors was as follows:

Name	Stock Awards
Peter J. Barris	100,000(a)
Eric D. Belcher	—
Dr. Jennifer A. Doudna(3)	25,000(b)
Dr. Wayne A.I. Frederick	25,000(c)
Robert Ghenchev	—
Dr. Scott Gottlieb	50,000(d)
Theodore J. Leonsis	—
Dr. Nadja West(5)	25,000(b)

(a) Represents a restricted stock award of 100,000 shares of our Class A common stock, one fourth of which vest on September 7, 2018, and 1/16 of which vest quarterly thereafter, provided that the recipient remains in continuous service with us through each vesting date, and subject to the earlier to occur of (i) the consummation of this offering and (ii) a change in control of our company.

(b) Represents 25,000 RSUs, one fourth of which vest on January 13, 2022, and 1/16 of which vest quarterly thereafter, provided that the recipient remains in continuous service with us through each vesting date, and subject to the earlier to occur of (i) the consummation of this offering and (ii) a change in control of our company.

(c) Represents 25,000 RSUs, one fourth of which vest on October 13, 2021, and 1/16 of which vest quarterly thereafter, provided that the recipient remains in continuous service with us through each vesting date, and subject to the earlier to occur of (i) the consummation of this offering and (ii) a change in control of our company.

(d) Represents 50,000 RSUs, one fourth of which vest on July 1, 2019, and 1/16 of which vest quarterly thereafter, provided that the recipient remains in continuous service with us through each vesting date, and subject to the earlier to occur of (i) the consummation of this offering and (ii) a change in control of our company.

(3) Dr. Doudna joined our board of directors in April 2021.

(4) Dr. Gottlieb joined our board of directors in October 2019, in connection with which he was entitled to an award of 50,000 RSUs, which were granted and approved by our board of directors in July 2021. The amount shown represents the aggregate grant date fair value of such RSUs as of July 2021.
(5) Dr. West joined our board of directors in April 2021.

Mr. Lefkofsky, our Chief Executive Officer, Founder and Chairman, is also a member of our board of directors but does not receive any additional compensation for his service as a director. See the section titled "Executive Compensation" for more information regarding the compensation earned by Mr. Lefkofsky.

We intend to adopt a non-employee director compensation policy in connection with this offering on terms to be determined by our board of directors. Under the non-employee director policy, our non-employee directors will be eligible to receive compensation for service on our board of directors and committees of our board of directors.

EXECUTIVE COMPENSATION

Our named executive officers, consisting of our principal executive officer and the next two most highly compensated executive officers, as of December 31, 2022, were:

- Eric Lefkofsky, Chief Executive Officer, Founder and Chairman;
- James Rogers, Chief Financial Officer; and
- Ryan Fukushima, Chief Operating Officer.

Summary Compensation Table

The following table presents all of the compensation awarded to or earned by or paid to our named executive officers for the years ended December 31, 2021 and 2022:

Name and Principal Position	Year	Salary	Stock Awards(1)	All Other Compensation	Total
Eric Lefkofsky	2022	$ —	$ —	$ 2,100(2)	$ 2,100
Chief Executive Officer, Founder and Chairman	2021	—	207,486,240	2,100(2)	207,488,340
James Rogers	2022	450,000	2,975,250	2,100(2)	3,427,350
Chief Financial Officer	2021	335,188(3)	3,871,600	2,100(2)	4,208,888
Ryan Fukushima	2022	499,858	5,550,870	90,816(4)	6,141,544
Chief Operating Officer	2021	422,396	5,134,070	75,296(4)	5,631,762

(1) Amounts reported represents the aggregate grant date fair value of RSUs granted to our executive officer during the fiscal year under our 2015 Plan, computed in accordance with ASC Topic 718. The assumptions used in calculating the grant date fair value of the stock awards reported in this column are set forth in the notes to our audited consolidated financial statements included elsewhere in this prospectus. This amount does not reflect the actual economic value that may be realized by the executive officer.

(2) Amounts shown represent pro-rated parking fees in the amount of $2,100.

(3) Mr. Rogers was appointed as our Chief Financial Officer in April 2021. The salary reported represents a pro-rata portion of his salary in 2021. His annualized base salary for 2021 was $450,000.

(4) Amount shown includes a housing stipend earned during 2022 and 2021.

Outstanding Equity Awards as of December 31, 2022

The following table sets forth certain information about outstanding equity awards granted to our named executive officers that remain outstanding as of December 31, 2022:

	Stock Awards[1]			
Name	Grant Date	Vesting Commencement Date	Number of Shares or Units of Stock that Have Not Vested (#)	Market Value of Shares or Units of Stock that Have Not Vested[2]
Eric Lefkofsky	July 14, 2021	February 1, 2021	4,866,000[3]	$ 143,984,940
James Rogers	December 11, 2017	July 31, 2017	24,000[4]	710,160
	March 13, 2018	February 24, 2018	26,000[4]	769,340
	April 17, 2019	February 1, 2019	15,000[4]	443,850
	April 15, 2020	February 1, 2020	15,000[4]	443,850
	April 21, 2021	February 1, 2021	20,000[3]	591,800
	April 21, 2021	March 9, 2021	100,000[5]	2,959,000
	April 27, 2022	February 15, 2022	75,000[5]	2,219,250
Ryan Fukushima	March 13, 2018	September 25, 2017	100,000[4]	2,959,000
	April 17, 2019	February 1, 2019	50,000[4]	1,479,500
	October 16, 2019	October 16, 2019	100,000[6]	2,959,000
	April 21, 2021	February 1, 2021	150,000[3]	4,438,500
	April 21, 2021	February 1, 2021	3,500[4]	103,565
	January 3, 2022	January 3, 2022	75,000[5]	2,219,250
	April 27, 2022	February 15, 2022	36,000[5]	1,065,240

(1) All stock awards listed in this table represent RSUs or PSUs, as applicable, granted pursuant to our 2015 Plan, the terms of which are described below under "—Equity Incentive Plans—2015 Stock Plan."

(2) This column represents the fair market value of a share of our common stock of $29.59 as of December 31, 2022 as determined by our board of directors, multiplied by the amount shown in the column "Stock Awards—Number of Shares or Units of Stock that Have Not Vested."

(3) One fourth of these PSUs vest on the one-year anniversary of the vesting commencement date and 1/12 of the remaining PSUs vest quarterly thereafter, provided that the recipient remains in continuous service with us through each vesting date, and subject to the earlier to occur of (i) the consummation of this offering and (ii) a change in control of our company, which we refer to as a Liquidity Event. These PSUs shall only become settleable into our common stock if, on the date on which such Liquidity Event occurs, the valuation of our company equals or exceeds $6 billion, as determined by our board of directors in its sole discretion.

(4) One fourth of these RSUs vest on the one-year anniversary of the vesting commencement date and 1/12 of the remaining RSUs vest quarterly thereafter, provided that the recipient remains in continuous service with us through each vesting date, and subject to the earlier to occur of (i) the consummation of this offering and (ii) a change in control of our company.

(5) One fifth of these RSUs vest on the one-year anniversary of the vesting commencement date and 1/16 of the remaining RSUs vest quarterly thereafter, provided that the recipient remains in continuous service with us through each vesting date, and subject to the earlier to occur of (i) the consummation of this offering and (ii) a change in control of our company.

(6) These RSUs have satisfied the service-based vesting requirement, and will become fully vested and settleable upon the occurrence of a Liquidity Event, provided that the recipient remains in continuous service with us through such vesting date.

See "—Employment Arrangements" for a description of vesting acceleration applicable to stock awards held by our named executive officers.

We may in the future, on an annual basis or otherwise, grant additional equity awards to our executive officers pursuant to our 2024 Plan the terms of which are described below under "—Equity Incentive Plans—2024 Equity Incentive Plan."

Employment Arrangements

In January 2023, we have entered into employment agreements with each of our named executive officers setting forth the terms and conditions of such executive's employment with us. The employment agreements generally provide for at-will employment and set forth the executive officer's initial base salary. Each of our named executive officers has also executed our standard form of proprietary information and inventions assignment agreement. Our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, disability and life insurance plans, in each case on the same basis as all of our other employees. Other than as described herein, we generally do not provide perquisites or personal benefits to our named executive officers.

Eric Lefkofsky

We entered into a new employment agreement with Mr. Lefkofsky, our Chief Executive Officer, effective January 2022. Mr. Lefkofsky's employment agreement provides for an annual base salary of $0, which is subject to review and adjustment by the company in its sole discretion.

In the event of a Change in Control (as defined in our 2015 Plan), 100% of Mr. Lefkofsky's then-unvested equity will immediately accelerate, vest and become exercisable.

James Rogers

We entered into a new employment agreement with Mr. Rogers, our Chief Financial Officer, effective January 2023. Mr. Rogers' employment agreement provides for an annual base salary of $500,000, which is subject to review and adjustment by the company in its sole discretion.

Under the terms of his employment agreement, if Mr. Rogers resigns for Good Reason or we terminate his employment without Cause (each as defined in his employment agreement), then Mr. Rogers will be eligible to receive salary continuation and reimbursement of premiums to continue health care benefits for a period of twelve months, subject to his execution of a general release in favor of our company. Further, if Mr. Rogers resigns for Good Reason or we terminate Mr. Rogers' employment without Cause, in either case in the event of a Change in Control (as defined in our 2015 Plan), 100% of his then-unvested equity will immediately accelerate, vest and become exercisable.

Ryan Fukushima

We entered into a new employment agreement with Mr. Fukushima, our Chief Operating Officer, effective January 2023. Mr. Fukushima's employment agreement provides for an annual base salary of $375,000 which is subject to review and adjustment by the company in its sole discretion.

Under the terms of his employment agreement, if Mr. Fukushima resigns for Good Reason or we terminate his employment without Cause (each as defined in his employment agreement), then Mr. Fukushima will be eligible to receive salary continuation and reimbursement of premiums to continue health care benefits for a period of twelve months, subject to his execution of a general release in favor of our company. Further, if Mr. Fukushima resigns for Good Reason or we terminate Mr. Fukushima's employment without Cause, in either case in the event of a Change in Control (as defined in our 2015 Plan), 100% of his then-unvested equity will immediately accelerate, vest and become exercisable.

Equity Incentive Plans

2024 Equity Incentive Plan

Our board of directors intends to adopt the 2024 Equity Incentive Plan, or the 2024 Plan, that will become effective on the date of the underwriting agreement related to this offering. Our 2024 Plan will come into

existence upon its adoption by our board of directors, but no grants will be made under our 2024 Plan prior to its effectiveness. Once our 2024 Plan becomes effective, no further grants will be made under our 2015 Plan.

Types of Awards. Our 2024 Plan provides for the grant of incentive stock options, or ISOs, nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance-based awards and other awards, or collectively, awards. ISOs may be granted only to our employees, including our officers, and the employees of our affiliates. All other awards may be granted to our employees, including our officers, our non-employee directors and consultants and the employees and consultants of our affiliates.

Authorized Shares. The maximum number of shares of our Class A common stock that may be issued under our 2024 Plan is 10,000,000 shares of our Class A common stock. The number of shares of our Class A common stock reserved for issuance under our 2024 Plan will automatically increase on January 1 of each year, beginning on January 1, 2023, and continuing through and including January 1, 2032, by 3% of the aggregate number of shares of common stock (both Class A and Class B) outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors prior to the applicable January 1. The maximum number of shares that may be issued upon the exercise of ISOs under our 2024 Plan is 30,000,000 shares.

Shares issued under our 2024 Plan will be authorized but unissued or reacquired shares of Class A common stock. Shares subject to awards granted under our 2024 Plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, will not reduce the number of shares available for issuance under our 2024 Plan. Additionally, shares issued pursuant to awards under our 2024 Plan that we repurchase or that are forfeited, as well as shares used to pay the exercise price of an award or to satisfy the tax withholding obligations to an award, will become available for future grant under our 2024 Plan.

The maximum number of shares of our Class A common stock subject to stock awards granted under the 2022 Plan or otherwise during any calendar year beginning in 2022 to any non-employee director, taken together with any cash fees paid by us to such non-employee director during such calendar year for service on the board of directors, will not exceed $750,000 in total value (calculating the value of any such stock awards based on the grant date fair value of such stock awards for financial reporting purposes), or, with respect to the calendar year in which a non-employee director is first appointed or elected to our board of directors, $1,000,000.

Plan Administration. Our board of directors, or a duly authorized committee of our board, may administer our 2024 Plan. Our board of directors has delegated concurrent authority to administer our 2024 Plan to the compensation committee under the terms of the compensation committee's charter. We sometimes refer to the board of directors, or the applicable committee with the power to administer our equity incentive plans, as the administrator. The administrator may also delegate to one or more of our officers the authority to (1) designate employees (other than officers) to receive specified awards, and (2) determine the number of shares subject to such awards.

The administrator has the authority to determine the terms of awards, including recipients, the exercise, purchase or strike price of awards, if any, the number of shares subject to each award, the fair market value of a share of our Class A common stock, the vesting schedule applicable to the awards, together with any vesting acceleration, and the form of consideration, if any, payable upon exercise or settlement of the award and the terms of the award agreements for use under our 2024 Plan.

In addition, subject to the terms of the 2024 Plan, the administrator also has the power to modify outstanding awards under our 2024 Plan, including the authority to reprice any outstanding option or stock appreciation right, cancel and re-grant any outstanding option or stock appreciation right in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any materially adversely affected participant.

Stock Options. ISOs and NSOs are granted pursuant to stock option agreements adopted by the administrator. The administrator determines the exercise price for a stock option, within the terms and conditions of the 2021 Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our Class A common stock on the date of grant. Options granted under the 2024 Plan vest at the rate specified in the stock option agreement as specified in the stock option agreement by the administrator.

The administrator determines the term of stock options granted under the 2024 Plan, up to a maximum of ten years. Unless the terms of an optionholder's stock option agreement provide otherwise, if an optionholder's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. The option term may be extended in the event that either an exercise of the option or an immediate sale of shares acquired upon exercise of the option following such a termination of service is prohibited by applicable securities laws or our insider trading policy. If an optionholder's service relationship with us or any of our affiliates ceases due to disability or death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual for cause. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of our Class A common stock issued upon the exercise of a stock option will be determined by the administrator and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of Class A common stock previously owned by the optionholder, (4) a net exercise of the option if it is an NSO and (5) other legal consideration approved by the administrator.

Options may not be transferred to third-party financial institutions for value. Unless the administrator provides otherwise, options generally are not transferable except by will, the laws of descent and distribution or pursuant to a domestic relations order. An optionholder may designate a beneficiary, however, who may exercise the option following the optionholder's death.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of our Class A common stock with respect to ISOs that are exercisable for the first time by an option holder during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will be treated as NSOs. No ISOs may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our parent or subsidiary corporations, unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted Stock Awards. Restricted stock awards are granted pursuant to restricted stock award agreements adopted by the administrator. Restricted stock awards may be granted in consideration for cash, check, bank draft or money order, services rendered to us or our affiliates or any other form of legal consideration. Class A common stock acquired under a restricted stock award may, but need not, be subject to a share repurchase option in our favor in accordance with a vesting schedule to be determined by the administrator. A restricted stock award may be transferred only upon such terms and conditions as set by the administrator. Except as otherwise provided in the applicable award agreement, restricted stock awards that have not vested may be forfeited or repurchased by us upon the participant's cessation of continuous service for any reason.

Restricted Stock Unit Awards. Restricted stock unit awards are granted pursuant to restricted stock unit award agreements adopted by the administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the administrator or in any other form of consideration

set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

Stock Appreciation Rights. Stock appreciation rights are granted pursuant to stock appreciation right grant agreements adopted by the administrator. The administrator determines the strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our Class A common stock on the date of grant. Upon the exercise of a stock appreciation right, we will pay the participant an amount equal to the product of (1) the excess of the per share fair market value of our Class A common stock on the date of exercise over the strike price, multiplied by (2) the number of shares of our Class A common stock with respect to which the stock appreciation right is exercised. A stock appreciation right granted under the 2024 Plan vests at the rate specified in the stock appreciation right agreement as determined by the administrator.

The administrator determines the term of stock appreciation rights granted under the 2024 Plan, up to a maximum of ten years. Unless the terms of a participant's stock appreciation right agreement provide otherwise, if a participant's service relationship with us or any of our affiliates ceases for any reason other than cause, disability or death, the participant may generally exercise any vested stock appreciation right for a period of three months following the cessation of service. The stock appreciation right term may be further extended in the event that exercise of the stock appreciation right following such a termination of service is prohibited by applicable securities laws. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a stock appreciation right be exercised beyond the expiration of its term.

Performance Awards. Our 2024 Plan permits the grant of performance-based stock and cash awards. The compensation committee can structure such awards so that the stock or cash will be issued or paid pursuant to such award only following the achievement of certain pre-established performance goals during a designated performance period. Performance awards that are settled in cash or other property are not required to be valued in whole or in part by reference to, or otherwise based on, our Class A common stock.

The performance goals may be based on any measure of performance selected by the board of directors. The compensation committee may establish performance goals on a company-wide basis, with respect to one or more business units, divisions, affiliates or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise (i) in the award agreement at the time the award is granted or (ii) in such other document setting forth the performance goals at the time the goals are established, the compensation committee will appropriately make adjustments in the method of calculating the attainment of the performance goals as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock-based compensation and the award of bonuses under our bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles and (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles.

Other Awards. The administrator may grant other awards based in whole or in part by reference to our Class A common stock. The administrator will set the number of shares under the award and all other terms and conditions of such awards.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2024 Plan; (2) the class and maximum number of shares by which the share reserve may increase automatically each year; (3) the class and maximum number of shares that may be issued upon the exercise of ISOs and (4) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding awards.

Corporate Transactions. The following applies to stock awards under the 2024 Plan in the event of a corporate transaction, unless otherwise provided in a participant's stock award agreement or other written agreement with us or one of our affiliates or unless otherwise expressly provided by the administrator at the time of grant. Under the 2024 Plan, a corporate transaction is generally the consummation of (1) a sale or other disposition of all or substantially all of our assets, (2) a sale or other disposition of at least 50% of our outstanding securities, (3) a merger, consolidation or similar transaction following which we are not the surviving corporation or (4) a merger, consolidation or similar transaction following which we are the surviving corporation but the shares of our Class A common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction.

In the event of a corporate transaction, any stock awards outstanding under the 2024 Plan may be assumed, continued or substituted for by any surviving or acquiring corporation (or its parent company), and any reacquisition or repurchase rights held by us with respect to the stock award may be assigned to the successor (or its parent company). If the surviving or acquiring corporation (or its parent company) does not assume, continue or substitute for such stock awards, then (i) with respect to any such stock awards that are held by participants whose continuous service has not terminated prior to the effective time of the corporate transaction, or current participants, the vesting (and exercisability, if applicable) of such stock awards will be accelerated in full to a date prior to the effective time of the corporate transaction (contingent upon the effectiveness of the corporate transaction), and such stock awards will terminate if not exercised (if applicable) at or prior to the effective time of the corporate transaction, and any reacquisition or repurchase rights held by us with respect to such stock awards will lapse (contingent upon the effectiveness of the corporate transaction), and (ii) any such stock awards that are held by persons other than current participants will terminate if not exercised (if applicable) prior to the effective time of the corporate transaction, except that any reacquisition or repurchase rights held by us with respect to such stock awards will not terminate and may continue to be exercised notwithstanding the corporate transaction. In addition, the plan administrator may also provide, in its sole discretion, that the holder of a stock award that will terminate upon the occurrence of a corporate transaction if not previously exercised will receive a payment, if any, equal to the excess of the value of the property the participant would have received upon exercise of the stock award over the exercise price otherwise payable in connection with the stock award.

A stock award may be subject to additional acceleration of vesting and exercisability upon or after a change in control as may be provided in an applicable award agreement or other written agreement, but in the absence of such provision, no such acceleration will occur.

Transferability. A participant may not transfer awards under our 2024 Plan other than by will, the laws of descent and distribution or as otherwise provided under our 2024 Plan.

Plan Amendment or Termination. Our board has the authority to amend, suspend or terminate our 2024 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of our stockholders. No ISOs may be granted after the tenth anniversary of the date our board adopted our 2024 Plan. No awards may be granted under our 2024 Plan while it is suspended or after it is terminated.

2024 Employee Stock Purchase Plan

Our board of directors has adopted the ESPP that will become effective immediately prior to and contingent upon the date of the underwriting agreement related to this offering. The purpose of our ESPP will be to secure the services of new employees, to retain the services of existing employees, and to provide incentives for such individuals to exert maximum efforts toward our success and that of our affiliates. The ESPP is implemented through a series of offerings with specific terms approved by the administrator and under which eligible employees are granted purchase rights to purchase shares of our Class A common stock on specified dates during such offerings. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll deductions, with a maximum dollar amount as designated by the administrator. The maximum aggregate number of shares of our Class A common stock that may be issued under our ESPP is 3,000,000 shares. The number of shares of our Class A common stock reserved for issuance under our ESPP will automatically increase on January 1 of each calendar year, beginning on January 1, 2023 and continuing through and including January 1, 2032, by the lesser of (1) 2% of the aggregate number of shares of common stock (both Class A and Class B) outstanding on December 31 of the preceding calendar year, (2) 6,000,000 shares and (3) a number of shares determined by our board. Shares subject to purchase rights granted under our ESPP that terminate without having been exercised in full will not reduce the number of shares available for issuance under our ESPP. Our board, or a duly authorized committee thereof, will administer our ESPP. The implementation of the ESPP and the terms of the offerings thereunder, if any, will be in the discretion of the administrator. The administrator does not currently have any intention to make offerings available under the ESPP.

2015 Stock Plan

The 2015 Plan was adopted by our board of directors and approved by our stockholders in September 2015. Our 2015 Plan has been periodically amended, most recently in July 2023. The 2015 Plan provides for the grant of ISOs, NSOs, restricted stock awards, RSUs, PSUs, and other stock-based awards. Our employees, officers, directors, consultants and advisors are eligible to receive awards under the 2015 Plan; however, ISOs may only be granted to our employees.

Awards. As of September 30, 2023, there were 16,339,419 shares of common stock issuable upon the vesting and settlement of RSUs and PSUs outstanding under the 2015 Plan, there were 4,250,000 shares of restricted stock outstanding under the 2015 Plan, there were 210,000 shares of common stock issuable upon the exercise of stock options outstanding under the 2015 Plan at an exercise price of $0.8542 per share, no options to purchase shares of our common stock had been exercised, and 1,098,364 shares of common stock were available for future issuance under the 2015 Plan. In February 2022 and April 2023, we increased the share reserve under the 2015 plan by 3,000,000 shares, respectively. On and after the effective date of the 2022 Plan described above, we will grant no further stock options or other awards under the 2015 Plan.

Authorized Shares. Subject to certain adjustments as provided in the 2015 Plan, the maximum aggregate number of shares of our Class A common stock that may be issued pursuant to awards under the 2015 Plan will not exceed 28,115,750 shares. The maximum number of shares of Class A common stock that may be issued pursuant to the exercise of ISOs under our 2015 Plan is 28,115,750 shares. Shares issued under our 2015 Plan will consist of authorized but unissued or reacquired shares of common stock or any combination thereof. Shares subject to awards granted under our 2015 Plan that expire, terminate, are cancelled without having been exercised or settled in full, are forfeited or repurchased for an amount not greater than the recipient's exercise or purchase price, will again become available for future grant under our 2015 Plan. Further, shares of Class A common stock tendered to us by a participant to exercise an award shall be added to shares of Class A common stock available for the grant of awards under the 2015 Plan. Additionally, shares underlying awards that are paid out in cash rather than in shares or withheld or reacquired to satisfy tax withholding obligations related to an award, will not reduce the number of shares available for issuance under our 2015 Plan.

Plan Administration. The 2015 Plan is administered by our board of directors. Our board of directors has broad discretion to administer the 2015 Plan, including the power and authority to determine the eligible individuals to whom awards will be granted, the number and type of awards to be granted and the terms and conditions of awards. The board may also accelerate the vesting or exercise of any award, reprice or otherwise adjust the exercise price of options or grant a new option in substitution for any option and make all other determinations, perform all other actions with respect to the 2015 Plan or any award thereunder as the board deems advisable to the extent not inconsistent with the provisions of the 2015 Plan or applicable law.

Stock Options. ISOs and NSOs granted under the 2015 Plan are evidenced by award agreements established by our board of directors. Our board of directors determines the exercise price of the stock options, within the terms and conditions of the 2015 Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of a share of Class A common stock on the date of grant. Options granted under the 2015 Plan vest at the rate specified in the option agreement as determined by the board. The term of an option may not exceed 10 years. Unless the board provides otherwise, if a participant's service relationship with us, our parent or subsidiary, or collectively, our affiliates, ceases for any reason other than due to the participant's disability or death or a termination for cause, the participant may generally exercise any vested options for a period of three months following the cessation of service. This period may be extended in the event that exercise of the option is prohibited by applicable securities laws. If a participant's service relationship with us or our affiliates ceases due to disability or death, the participant's legal representative or a beneficiary may generally exercise any vested options for a period of 12 months following the cessation of service. In the event that a participant's service relationship with us is terminated for cause, options held by the participant will terminate in their entirety upon the termination date. In no event may an option be exercised beyond the expiration of its term.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of an award consisting of ISOs that are exercisable for the first time by a participant during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own shares of common stock possessing more than 10% of our total combined voting power unless (1) the option exercise price is at least 110% of the fair market value of the shares of common stock subject to the option on the date of grant and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted Stock Awards. RSAs may be granted in the form of restricted stock bonuses, which are shares of Class A common stock for which no monetary payment is required, or restricted stock purchase rights, which are shares of Class A common stock for which a purchase price must be paid. Our board of directors determines the terms and conditions of RSAs, including purchase price, if any, vesting and forfeiture terms. In general, during any vesting period, a participant will have all of the rights of a stockholder holding shares of Class A common stock. If determined by the board and provided in an award agreement, dividends distributed prior to vesting will be subject to the same restrictions and risk of forfeiture as the restricted stock with respect to which the distribution was made. Except as otherwise provided in an award agreement, if a participant's service relationship with us ends for any reason, (1) we may repurchase any shares acquired pursuant to a restricted stock purchase right that remains subject to vesting conditions upon a participant's termination and (2) the participant will forfeit any shares under a restricted stock bonus award that have not vested as of the date of termination.

Restricted Stock Unit Awards. An RSU represents the right to receive on a future date or event a share of Class A common stock or an amount of cash in lieu thereof. RSU awards may be granted in consideration for services actually rendered to us or our affiliates or for the benefit of us or our affiliates. An RSU award may be settled in cash or by delivery of stock or other property as deemed appropriate by the board. Additionally, if provided in the award agreement, dividend equivalents may be credited in respect of shares covered by an RSU award. Except as otherwise provided in the applicable award agreement, RSU awards that have not vested will be forfeited once the participant's continuous service ends for any reason.

In general, RSU awards that have been granted under the 2015 Plan are subject to both a multi-year service-based vesting requirement and a "Liquidity Event" vesting requirement. The Liquidity Event requirement will be

satisfied on the first to occur of: (1) a change in control (as described below) or (2) the effective date of a registration statement under the Securities Act of 1933, as amended, or the Securities Act, for the sale of our Class A common stock, or the Liquidity Event Date. The RSU awards vest as follows:

- No RSUs will vest prior to the Liquidity Event Date.
- If the Liquidity Event Date occurs prior to the first anniversary of the vesting start date, then no RSUs will vest on the Liquidity Event Date and thereafter 1/16th of the RSUs will vest for each full three months of continuous service elapsed from the first anniversary of the vesting start date, subject to the participant's continuous service.
- If the Liquidity Event Date occurs on or after the first anniversary of the vesting start date but prior to the second anniversary of the vesting start date, then 1/4th of the RSUs will vest on the Liquidity Event Date and thereafter an additional 1/16th of the RSUs will vest for each full three months of continuous service elapsed from the first anniversary of the vesting start date, subject to the participant's continuous service.
- If the Liquidity Event Date occurs after the second anniversary of the vesting start date then 1/16th of the RSUs will vest on the Liquidity Event Date for each full three months that has elapsed since the vesting start date and thereafter an additional 1/16th of the RSUs will vest for each full three months that occurs from the vesting start date, subject to the participant's continuous service.

We have also granted Performance-Vesting Restricted Stock Unit awards, or PSUs, which include both a Liquidity Event vesting requirement and a performance-vesting condition. Like the RSU awards, the Liquidity Event requirement of the PSUs will be satisfied on the Liquidity Event Date. The performance-vesting condition of the PSUs will be satisfied in full, if, on the Liquidity Event Date, the total enterprise valuation of the company equals or exceeds $6 billion, subject to certain adjustments as described in the 2015 Plan.

Transferability. Awards are generally not transferable other than by will or the laws of descent and distribution. The board, in its discretion, may allow certain transfers of options as set forth in an award agreement and subject to certain securities law restrictions.

Adjustments. In the event of certain corporate events or changes in our capitalization, the board will make adjustments to one or more of the number and kind of shares that may be delivered under the 2015 Plan or covered by each outstanding award, the ISO share reserve under the 2015 Plan and the exercise or purchase price per share of outstanding awards in order to prevent dilution or enlargement of the participants' rights under the 2015 Plan.

Change in Control. Upon a change in control, without the consent of any participant, the board may provide for any one or more of the following:

- accelerate the time of exercisability, vesting and/or settlement of an award,
- the assumption or substitution of outstanding award by a surviving, continuing, successor or purchasing corporation or other business entity (or any parent thereof); or
- awards to be cancelled, to the extent not vested or exercised before the transaction, in exchange for such cash, stock or other property in an amount equal to the excess, if any, of (1) the fair market value of the consideration paid in the transaction, over (2) any exercise or purchase price payable under such award.

Under the 2015 Plan, a change in control is generally (1) an indirect sale or exchange by our stockholders of securities representing more than 50% of the total combined voting power of then outstanding voting securities entitled to vote generally in the election of directors, (2) a merger or consolidation in which we are a party, (3) the sale, exchange or transfer of all or substantially all our assets, or (4) our complete liquidation or dissolution.

Withholding. We have the right to deduct from any and all payments made under the 2015 Plan, or to require the participant, through payroll withholding, cash payment or otherwise, to satisfy any federal, state, local and foreign taxes that are required to be withheld. We are under no obligation to deliver shares of common stock or to release shares from an escrow or to make any payment in cash until such tax withholding obligations have been satisfied by the participant.

Plan Amendment and Termination. The 2015 Plan will continue in effect until its termination by our board, provided that all awards under the 2015 Plan will be granted, if at all, within ten (10) years from the date the 2015 Plan was adopted by our board. Our board may amend, suspend or terminate the 2015 Plan at any time, provided that without stockholder approval, the 2015 Plan cannot be amended to increase the number of shares authorized, change the class of persons eligible to receive incentive stock options, or effect any other change that would require stockholder approval under any applicable law or listing rule. In general, no amendment, suspension or termination of the 2015 Plan may have a materially adverse effect on any outstanding award without the consent of the participant.

Limitations of Liability and Indemnification Matters

On the closing of this offering, our amended and restated certificate of incorporation will contain provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to the corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Such limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation that will be in effect on the closing of this offering will authorize us to indemnify our directors, officers, employees, and other agents to the fullest extent permitted by Delaware law. Our amended and restated bylaws that will be in effect on the closing of this offering will provide that we are required to indemnify our directors and officers to the fullest extent permitted by Delaware law and may indemnify our other employees and agents. Our amended and restated bylaws that will be in effect on the closing of this offering will also provide that, on satisfaction of certain conditions, we will advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee, or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers, and other employees as determined by the board of directors. With certain exceptions, these agreements provide for indemnification for related expenses including attorneys' fees, judgments, fines, and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these amended and restated certificate of incorporation and amended and restated bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against

our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted for directors, executive officers, or persons controlling us, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Rule 10b5-1 Sales Plans

Our directors and officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our Class A common stock or Class B common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades under parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers may also buy or sell additional shares outside of a Rule 10b5-1 plan when they do not possess of material nonpublic information, subject to compliance with the terms of our insider trading policy.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than compensation arrangements for our directors and executive officers, which are described elsewhere in this prospectus, below we describe transactions since January 1, 2020 to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed $120,000; and
- any of our directors, executive officers or holders of more than 5% of our capital stock at the time of such transaction, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest.

Series G Convertible Preferred Stock Financing

From February through April 2020, we sold an aggregate of 2,537,290 shares of our Series G convertible preferred stock at a price per share of $38.3524, for an aggregate purchase price of approximately $97.3 million in private placements to accredited investors. During this period, we issued a total of 2,667,660 shares of our Series G convertible preferred stock, of which 130,370 shares of our Series G convertible preferred stock were repurchased from Tempus Series G Investments, LLC at the original issue price per share, for an aggregate repurchase price of approximately $5.0 million, in order to accommodate the issuance and sale of shares of our Series G convertible preferred stock to an additional purchaser. The table below sets forth the number of shares of our Series G convertible preferred stock purchased by our executive officers, directors, holders of more than 5% of our capital stock and their affiliated entities or immediate family members. Each share of Series G convertible preferred stock will automatically convert into one share of our Class A common stock upon the closing of this offering. The holders of our Series G convertible preferred stock listed below are entitled to specified registration rights. See the section titled "Description of Capital Stock—Registration Rights" for additional information regarding these registration rights.

Participants	Number of Series G Shares Purchased	Aggregate Purchase Price
Innovation Group Investors, L.P. – 2011 Series(1)	130,370	$ 5,000,000.63
New Enterprise Associates 16, L.P.(2)	182,517	6,999,962.52
Novo Holdings A/S(3)	260,739	9,999,962.90
Tempus Series G Investments, LLC(1)	451,378(4)	17,311,426.08

(1) Each of Innovation Group Investors, L.P. – 2011 Series and Tempus Series G Investments, LLC is affiliated with and controlled by Eric Lefkofsky, our Chief Executive Officer, Founder and Chairman.
(2) Peter J. Barris, a member of our board of directors, served as a Managing General Partner at NEA at the time of this transaction.
(3) Robert Ghenchev, a member of our board of directors, is the Head of Novo Growth at Novo Holdings A/S.
(4) Tempus Series G Investments, LLC purchased an aggregate of 451,378 shares of our Series G convertible preferred stock, of which 130,370 shares were repurchased by us in April 2020. See the section titled "—Repurchases of Equity Securities—Redemptions of Preferred Stock" below. As a result, Tempus Series G Investments, LLC currently owns 321,008 shares of our Series G convertible preferred stock.

Series G-2 Convertible Preferred Stock Financing

In November 2020 and January 2021, we sold an aggregate of 3,453,139 shares of our Series G-2 convertible preferred stock at a price per share of $57.3069 for an aggregate purchase price of approximately $189.0 million in private placements to accredited investors. During this period, we issued a total of 3,584,015 shares of our Series G-2 convertible preferred stock, of which 130,876 shares of our Series G-2 convertible preferred stock were repurchased from Blue Media, LLC at the original issue price per share, for an aggregate

repurchase price of approximately $7.5 million, in order to accommodate the issuance and sale of shares of our Series G-2 convertible preferred stock to additional purchasers. The table below sets forth the number of shares of our Series G-2 convertible preferred stock purchased by our executive officers, directors, holders of more than 5% of our capital stock, and their affiliated entities or immediate family members. Each share of Series G-2 convertible preferred stock will automatically convert into one share of our Class A common stock upon the closing of this offering. The holders of our Series G-2 convertible preferred stock listed below are entitled to specified registration rights. See the section titled "Description of Capital Stock—Registration Rights" for additional information regarding these registration rights.

Participants	Number of Series G-2 Shares Purchased	Aggregate Purchase Price
Novo Holdings A/S(1)	261,748	$ 14,999,966.47
Blue Media, LLC(2)	130,876(3)	7,500,097.84

(1) Robert Ghenchev, a member of our board of directors, is the Head of Novo Growth at Novo Holdings A/S.
(2) Blue Media, LLC is controlled by Eric Lefkofsky, our Chief Executive Officer, Founder and Chairman.
(3) Blue Media, LLC purchased an aggregate of 130,876 shares of our Series G-2 convertible preferred stock, all of which were repurchased by us in January 2021. See the section titled "—Repurchases of Equity Securities—Redemptions of Preferred Stock" below. As a result, Blue Media, LLC is no longer a holder of our Series G-2 convertible preferred stock.

Series G-3 Convertible Preferred Stock Financing

In April 2022, we sold an aggregate of 1,614,114 shares of our Series G-3 convertible preferred stock at a price per share of $57.3069 for an aggregate purchase price of approximately $92.5 million in private placements to accredited investors. The table below sets forth the number of shares of our Series G-3 preferred stock purchased by our executive officers, directors, holders of more than 5% of our capital stock, and their affiliated entities or immediate family members. The terms of our Series G-3 preferred stock provide that in the event of an initial public offering of our common stock, each share of Series G-3 preferred stock would be converted into a number of shares of our Class A common stock equal to (i) $57.3069 per share, plus any accrued and unpaid dividends on such share, divided by (ii) the lesser of (a) $51.5762 and (b) 90% of the public offering price in this offering (or, if this offering is completed after June 30, 2023, 85% of the public offering price in this offering). The holders of our G-3 convertible preferred stock listed below are entitled to specified registration rights. See the section titled "Description of Capital Stock—Registration Rights" for additional information regarding these registration rights.

Participants	Number of Series G-3 Shares Purchased	Aggregate Purchase Price
Blue Media, LLC(1)	61,074	$ 3,499,961.61

(1) Blue Media, LLC is controlled by Eric Lefkofsky, our Chief Executive Officer, Founder and Chairman.

Investor Rights, Voting, and Right of First Refusal and Co-Sale Agreements

In connection with our convertible preferred stock financings, we entered into investor rights, voting, right of first refusal, and co-sale agreements containing registration rights, information rights, voting rights, board representation rights, indemnification provisions and rights of first refusal, among other things, with certain holders of our convertible preferred stock and certain holders of our common stock, including entities affiliated with Eric Lefkofsky and Keeks, LLC.

The covenants included in these stockholder agreements generally will terminate upon the closing of this offering, except with respect to registration rights, as more fully described in the section titled "Description of Capital Stock—Registration Rights." See also the section titled "Principal and Selling Stockholders" for additional information regarding beneficial ownership of our capital stock.

Real Property Leases

In January 2018, we entered into an office lease with a third-party landlord in connection with which Lightbank LLC was allowed to terminate its then-outstanding lease with the landlord. We received $1.5 million from Lightbank LLC to be amortized over the course of the lease, of which $0.8 million remains to be amortized. We currently sublease a portion of this office space to Lightbank LLC, Lefkofsky Family Foundation and 346 Investment Partners, each an entity affiliated with and controlled by Mr. Lefkofsky, on a month-to-month basis. As of September 30, 2023, we have received an aggregate of $0.6 million in sublease income from these related parties.

Aircraft for Business Travel

We entered into an arm's length arrangement in 2018 pursuant to which we charter for business use an aircraft owned by 346 Investment Partners LLC, an entity affiliated with and controlled by Mr. Lefkofsky, through a third-party aircraft management company, which in turn reimburses 346 Investment Partners LLC at market rates. As of September 30, 2023, we have paid an aggregate of $0.2 million to 346 Investment Partners LLC pursuant to this arrangement.

Agreements with Pathos

In August 2021, we entered into a master agreement with Pathos AI, Inc., or, Pathos, a healthcare company co-founded by Mr. Lefkofsky, our Chief Executive Officer, Founder and Chairman, and Mr. Fukushima, our Chief Operating Officer. Mr. Lefkofsky currently serves as Executive Chairman and a member of Pathos' board of directors. As of the date of this prospectus, we have a warrant to purchase 23,456,790 shares, or approximately 19% of the current outstanding equity in Pathos, for $.0125 per share. The warrant will automatically exercise upon a change of control (as defined therein) or upon an initial public offering of Pathos' securities. Pursuant to this master agreement, we granted Pathos a limited, non-exclusive, revocable, non-transferable right and license, without right of sublicense, to access and download certain de-identified records from our proprietary database. Pathos in turn agreed to pay us certain license fees depending on the number of de-identified records it elects to license during the term of the master agreement. Pathos also agreed to pay us a subscription fee equal to $0.4 million per year for access to our Lens product for the term of the master agreement. The master agreement provides for an initial term of five years, with a subsequent five-year renewal provision unless the agreement is terminated. Pathos may own certain analysis, summaries, reports or other information it creates with, or based upon, the de-identified data it licenses from us, and it may continue to use such information following termination of the agreement. Either party may terminate the agreement after the initial five-year term by prior written notice to the other party. In March 2022, Pathos paid us its first annual subscription fee of $0.4 million. As of the date of this prospectus, we have not exercised the warrant to purchase shares of Pathos common stock.

In March 2022, we and Pathos entered into a sequencing pilot project under the master agreement pursuant to which we will run our xT NGS assay on 15 samples provided by Pathos in exchange for a one-time discounted fee of less than $0.1 million.

In April 2022, we and Pathos entered into a non-exclusive analytical services program under the master agreement pursuant to which we will provide services to help Pathos use our de-identified data to answer research and development questions posed by Pathos. Under the program, we will initially provide 500 hours of analytical services to Pathos over 6 months in exchange for increasing by $0.1 million the annual subscription fee payable by Pathos. Pathos has the right to extend the program either in six month increments or by increasing by 1,000 the number of analytical services hours we provide in any six-month period. In each case, the fee paid by Pathos will increase proportionally.

In March 2023, we and Pathos entered into a statement of work for a fee of less than $0.1 million under the master agreement pursuant to which Tempus Compass will perform certain services in accordance with written statements of work entered into from time-to-time.

In April 2023, Ryan Fukushima, Tempus's Chief Operating Officer, was appointed as interim Chief Executive Officer of Pathos. In connection with such appointment, our Board of Directors has authorized the Company to amend Mr. Fukushima's employment agreement to, among other things, acknowledge his service as Pathos's interim Chief Executive Officer and allow him to split his professional time between the two companies, with no less than 50% of professional time devoted to Tempus.

Equity Grants to Directors and Executive Officers

We have granted RSUs to certain of our directors and executive officers. For more information regarding the stock awards granted to our directors and named executive officers, see the sections titled "Management—Non-Employee Director Compensation" and "Executive Compensation."

Repurchases of Equity Securities

Redemptions of Common and Preferred Stock

In April 2020, we repurchased an aggregate of 190,639 shares of voting common stock from the Lefkofsky Family Foundation, an organization affiliated with Eric Lefkofsky, for a total purchase price of approximately $7.3 million.

In addition, from April 2020 to February 2021, we repurchased an aggregate of 2,007,569 shares of various series of convertible preferred stock from entities affiliated with and controlled by Eric Lefkofsky at the original issue price for a total purchase price of approximately $26.9 million. Such repurchases were affected in order to accommodate the issuance and sale of convertible preferred stock to additional purchasers.

Acceleration of Vesting for RSUs

In May 2017, we granted 300,000 RSUs to Erik Phelps, our Executive Vice President and Chief Administrative and Legal Officer, pursuant to a restricted stock unit agreement. In April 2021, our board of directors approved a waiver of a vesting condition such that 8,725 of the RSUs held by Mr. Phelps immediately vested and settled for 8,725 shares of our Class A common stock, 873 of the RSUs were cancelled, and 290,402 of the RSUs remain outstanding.

Indemnification Agreements

Our amended and restated certificate of incorporation that will be in effect on the closing of this offering will contain provisions limiting the liability of directors, and our amended and restated bylaws that will be in effect on the closing of this offering will provide that we will indemnify each of our directors and officers to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect on the closing of this offering will also provide our board of directors with discretion to indemnify our employees and other agents when determined appropriate by the board. In addition, we have entered into an indemnification agreement with each of our directors and executive officers, which requires us to indemnify them. For more information regarding these agreements, see the section titled "Executive Compensation—Limitations of Liability and Indemnification Matters."

Policies and Procedures for Transactions with Related Persons

Prior to the closing of this offering, we intend to adopt a written policy that our executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of any class of our common stock, and

any members of the immediate family of any of the foregoing persons are not permitted to enter into a related person transaction with us without the approval or ratification of our board of directors or our audit committee. Any request for us to enter into a transaction with an executive officer, director, nominee for election as a director, beneficial owner of more than 5% of any class of our common stock, or any member of the immediate family of any of the foregoing persons, in which the amount involved exceeds $120,000 and such person would have a direct or indirect interest, must be presented to our board of directors or our audit committee for review, consideration, and approval. In approving or rejecting any such proposal, our board of directors or our audit committee is to consider the material facts of the transaction, including whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person's interest in the transaction.

PRINCIPAL AND SELLING STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our shares as of November 6, 2023 by:

- each named executive officer;
- each of our directors;
- our directors and executive officers as a group;
- each of the selling stockholders; and
- each other person or entity known by us to own beneficially more than 5% of our Class A common stock and Class B common stock (by number or by voting power).

We have determined beneficial ownership in accordance with the rules and regulations of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Except as indicated by the footnotes below, we believe, based on information furnished to us, that the persons and entities named in the table below have sole voting and sole investment power with respect to all shares that they beneficially own, subject to applicable community property laws.

Applicable percentage ownership before this offering is based on shares of Class A common stock and 5,374,899 shares of Class B common stock outstanding as of , after giving effect to the Series G-4 Financing and assuming the automatic conversion of all outstanding shares of our redeemable convertible preferred stock, other than our Series B preferred stock, into shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, the issuance of Additional Class A Conversion Shares assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, the conversion of all outstanding shares of our Series B convertible preferred stock into 5,374,899 shares of Class B common stock, and the automatic conversion of all outstanding shares of our nonvoting common stock into 4,917,823 shares of Class A common stock, each of which will occur upon the closing of this offering. See "Prospectus Summary—The Offering" for a description of the Additional Class A Conversion Shares, as the number of Additional Class A Conversion Shares that will be issued depends on the initial public offering price of our Class A common stock.

Applicable percentage ownership after this offering assumes that the underwriters' option to purchase additional shares to cover over-allotments, if any, from the selling stockholders is not exercised is based on (1) shares of Class A common stock and (2) 5,374,899 shares of Class B common stock outstanding immediately after the closing of this offering. Applicable percentage ownership after this offering if the underwriters' option to purchase additional shares to cover over-allotments, if any, from the selling stockholders is exercised in full is based on (1) shares of Class A common stock and (2) 5,374,899 shares of Class B common stock outstanding immediately after the closing of this offering. Applicable percentage ownership after this offering also excludes any potential purchases in this offering by the persons and entities named in the table below. In computing the number of shares beneficially owned by a person and the percentage ownership of such person, we deemed to be outstanding all shares subject to RSUs held by the person that would vest based on service-based vesting conditions within 60 days of September 30, 2023. However, except as described above, we did not deem such shares outstanding for the purpose of computing the percentage ownership of any other person.

Unless otherwise indicated, the address for each beneficial owner listed in the table below is c/o Tempus Labs, Inc., 600 West Chicago Avenue, Suite 510 Chicago, Illinois 60654.

Name of Beneficial Owner	Beneficial Ownership Before the Offering					Beneficial Ownership After the Offering if Underwriters' Option is Not Exercised					Number of Shares of Class A Common Stock Being Offered	Beneficial Ownership After the Offering if Underwriters' Option is Exercised in Full				
	Class A Common Stock		Class B Common Stock		% of Total Voting Power Before the Offering	Class A Common Stock		Class B Common Stock		% of Total Voting Power After the Offering		Class A Common Stock		Class B Common Stock		% of Total Voting Power After the Offering
	Shares	%	Shares	%		Shares	%	Shares	%			Shares	%	Shares	%	
5% Stockholders:																
Eric Lefkofsky[1]																
Keeks, LLC[2]																
Other Directors and Named Executive Officers:																
Erik Phelps[3]																
Vanessa Rollings[4]																
Peter J. Barris[5]																
Eric D. Belcher																
Jennifer A. Doudna, Ph.D.[6]																
Wayne A.I. Frederick, M.D.[7]																
Robert Ghenchev																
Scott Gottlieb, M.D.[8]																
Theodore J. Leonsis																
Nadja West, M.D.[9]																
All directors and executive officers as a group (12 persons)[10]																
Other Selling Stockholders:																

* Represents beneficial ownership of less than 1%.

† Percentage of total voting power represents voting power with respect to all shares of our Class A and Class B common stock, as a single class. The holders of our Class B common stock are entitled to votes per share, and holders of our Class A common stock are entitled to one vote per share. See the section titled "Description of Capital Stock—Class A Common Stock and Class B Common Stock" for additional information about the voting rights of our Class A and Class B common stock.

(1) Prior to this offering, consists of (a) shares of Class A common stock held by Blue Media, LLC, (b) shares of Class A common stock held by Gray Media, LLC, (c) shares of Class A common stock held by Innovation Group Investors, L.P. - Series 3, (d) shares of Class A common stock held by Innovation Group Investors, L.P. - Series 1B, (e) shares of Class A common stock held by Lightbank Investments 1B, LLC, (f) shares of Class A common stock held by Tempus Series A Investments, LLC, (g) shares of Class B common stock held by Tempus Series B Investments, LLC, (h) shares of Class A common stock held by Tempus Series B-1 Investments, LLC, (i) shares of Class A common stock held by Tempus Series B-2 Investments, LLC, (j) shares of Class A common stock held by Tempus Series C Investments, LLC, (k) shares of Class A common stock held by Tempus Series D Investments, LLC, (l) shares of Class A common stock held by Tempus Series E Investments, LLC, (m) shares of Class A common stock held by Tempus Series F Investments, LLC, and (n) shares of Class A common stock held by Tempus Series G Investments, LLC. Concurrently with, and contingent upon, the effectiveness of the registration statement of which this prospectus forms a part, shares of Class A common stock held by each of Tempus Series A Investments, LLC, Tempus Series B-1 Investments, LLC, Tempus Series B-2 Investments, LLC, Tempus Series C Investments, LLC, Tempus Series D Investments, LLC, Tempus Series E Investments, LLC, Tempus Series F Investments, LLC and Tempus Series G Investments, LLC will be distributed pro rata to the members of each entity. Following the distributions, no other stockholder will be a beneficial owner of more than 5% of the company's common stock. Mr. Lefkofsky's beneficial ownership after the offering gives effect to the foregoing distributions, and consists of (i) shares of Class A common stock held by Blue Media, LLC, (ii) shares of Class A common stock held by Gray Media, LLC, (iii) shares of Class A common stock held by Innovation Group Investors, L.P. - Series 1B, (iv) shares of Class A common stock held by Innovation Group Investors, L.P. - 2011 Series, (v) shares of Class A common stock held by Lightbank Global LLC, (vi) shares of Class A common stock held by Lightbank Investments 1B, LLC and (vii) shares of Class B common stock held by Tempus Series B Investments, LLC. Mr. Lefkofsky is the controlling member of, and may be deemed to have shared voting, investment and dispositive power with respect to the shares held by, the aforementioned entities. On the date that is 181 days following the effective date of the registration statement of which this prospectus forms a part, Blue Media LLC, the controlling member of Tempus Series B Investments, LLC, will exchange shares of Class A common stock for all interests in Tempus Series B Investments, LLC such that following the exchange, Mr. Lefkofsky will continue be the controlling member of, and may be deemed to have shared voting, investment and dispositive power with respect to the shares of Class B common stock held by, Tempus Series B Investments,

LLC. Mr. Lefkofsky also holds RSUs, for which the service-based vesting condition would be satisfied within 60 days of , 2023.

(2) Represents shares of Class A common stock held by Keeks, LLC. To our knowledge, Kimberly Keywell is the controlling shareholder of, and may be deemed to have shared voting, investment and dispositive power with respect to the shares held by, the aforementioned entity. Ms. Keywell executed an irrevocable proxy and power of attorney providing that Bradley A. Keywell may vote and exercise all voting rights with respect to the shares of Class A common stock held by Keeks, LLC.

(3) Represents shares of Class A common stock issuable upon settlement of RSUs held by Mr. Phelps for which the service-based vesting condition would be satisfied within 60 days of , 2023.

(4) Represents shares of Class A common stock issuable upon settlement of RSUs held by Ms. Rollings, for which the service-based vesting condition would be satisfied as of September 4, 2021 pursuant to the terms of Ms. Rollings' separation agreement.

(5) Represents shares of Class A common stock.

(6) Represents shares of Class A common stock issuable upon settlement of RSUs held by Ms. Doudna for which the service-based vesting condition would be satisfied within 60 days of , 2023.

(7) Represents shares of Class A common stock issuable upon settlement of RSUs held by Mr. Frederick for which the service-based vesting condition would be satisfied within 60 days of , 2023.

(8) Represents shares of Class A common stock issuable upon settlement of RSUs held by Mr. Gottlieb for which the service-based vesting condition would be satisfied within 60 days of , 2023.

(9) Represents shares of Class A common stock issuable upon settlement of RSUs held by Ms. West for which the service-based vesting condition would be satisfied within 60 days of , 2023.

(10) Consists of (a) shares of Class A common stock, (b) shares of Class B common stock and (c) shares of Class A common stock issuable upon the settlement of RSUs for which the service-based vesting condition would be satisfied within 60 days of , 2023.

DESCRIPTION OF CAPITAL STOCK

General

The following description of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation and the amended and restated bylaws that will be in effect following the closing of this offering. Copies of these documents have been filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part. The descriptions of the common stock and convertible preferred stock reflect changes to our capital structure that will be in effect following the closing of this offering.

On the closing of this offering, our amended and restated certificate of incorporation will provide for two classes of common stock: Class A common stock and Class B common stock. In addition, our amended and restated certificate of incorporation that will be in effect on the closing of this offering will authorize shares of undesignated preferred stock, the rights, preferences, and privileges of which may be designated from time to time by our board of directors.

Upon the closing of this offering, our authorized capital stock will consist of 1,025,500,000 shares, all with a par value of $0.0001 per share, of which:

- 1,000,000,000 shares are designated Class A common stock;
- 5,500,000 shares are designated Class B common stock; and
- 20,000,000 shares are designated preferred stock.

As of September 30, 2023, we had outstanding:

- shares of Class A common stock, which gives effect to (1) the Series G-4 Financing, (2) the conversion of all outstanding shares of convertible preferred stock, other than Series B preferred stock, into shares of Class A common stock, including the issuance of the Additional Class A Conversion Shares (based on an assumed initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus), (3) the conversion of all outstanding shares of nonvoting common stock into 4,917,823 shares of Class A common stock, and (4) the issuance of approximately 13,388,209 shares of Class A common stock upon settlement of RSUs and PSUs for which the service-based vesting condition was satisfied on or before September 30, 2023 and for which the performance-based vesting condition will be satisfied in connection with this offering, which settlement will occur upon the expiration of the lock-up period in connection with this offering;
- 5,374,899 shares of Class B common stock, which assumes the conversion of all outstanding shares of convertible Series B preferred stock into 5,374,899 shares of Class B common stock.

See “Prospectus Summary—The Offering” for a description of the Additional Class A Conversion Shares, as the number of Additional Class A Conversion Shares that will be issued depends on the initial public offering price of our Class A common stock.

Our outstanding capital stock was held by 86 stockholders of record as of September 30, 2023. Our board of directors is authorized, without stockholder approval except as required by the listing standards of the Nasdaq stock market, to issue additional shares of our capital stock.

Class A Common Stock and Class B Common Stock

Voting Rights

The Class A common stock is entitled to one vote per share on any matter that is submitted to a vote of our stockholders. Holders of our Class B common stock are entitled to 30 votes per share on any matter submitted to

our stockholders. Holders of shares of Class B common stock and Class A common stock will vote together as a single class on all matters (including the election of directors) submitted to a vote of stockholders, unless otherwise required by Delaware law or our amended and restated certificate of incorporation.

Under Delaware law, holders of our Class A common stock or Class B common stock would be entitled to vote as a separate class if a proposed amendment to our amended and restated certificate of incorporation would increase or decrease the aggregate number of authorized shares of such class, increase or decrease the par value of the shares of such class, or alter or change the powers, preferences, or special rights of the shares of such class so as to affect them adversely. While the holders of our Class A common stock have waived their right to vote as a separate class as to amendments to our amended and restated certificate of incorporation that would increase or decrease the aggregate number of authorized shares of Class A common stock, they are entitled to the other class protections provided under Delaware law. As a result, in these limited instances, the holders of a majority of the Class A common stock could defeat any amendment to our amended and restated certificate of incorporation. For example, if a proposed amendment of our amended and restated certificate of incorporation provided for the Class A common stock to rank junior to the Class B common stock with respect to (1) any dividend or distribution, (2) the distribution of proceeds were we to be acquired or (3) any other right, Delaware law would require the vote of the Class A common stock. In this instance, the holders of a majority of Class A common stock could defeat that amendment to our amended and restated certificate of incorporation.

Our amended and restated certificate of incorporation that will be in effect on the closing of this offering will not provide for cumulative voting for the election of directors.

Economic Rights

Except as otherwise will be expressly provided in our amended and restated certificate of incorporation that will be in effect on the closing of this offering or required by applicable law, all shares of Class A common stock and Class B common stock will have the same rights and privileges and rank equally, share ratably and be identical in all respects for all matters, including those described below.

Dividends and Distributions. Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of Class A common stock and Class B common stock will be entitled to share equally, identically, and ratably, on a per share basis, with respect to any dividend or distribution of cash or property paid or distributed by the company, unless different treatment of the shares of the affected class is approved by the affirmative vote of the holders of a majority of the outstanding shares of such affected class, voting separately as a class. See the section titled “Dividend Policy” for additional information.

Liquidation Rights. On our liquidation, dissolution, or winding-up, the holders of Class A common stock and Class B common stock will be entitled to share equally, identically, and ratably in all assets remaining after the payment of any liabilities, liquidation preferences, and accrued or declared but unpaid dividends, if any, with respect to any outstanding preferred stock, unless a different treatment is approved by the affirmative vote of the holders of a majority of the outstanding shares of such affected class, voting separately as a class.

Change of Control Transactions. The holders of Class A common stock and Class B common stock will be treated equally and identically with respect to shares of Class A common stock or Class B common stock owned by them, unless different treatment of the shares of each class is approved by the affirmative vote of the holders of a majority of the outstanding shares of the class treated differently, voting separately as a class, on (a) the closing of the sale, transfer, or other disposition of all or substantially all of our assets, (b) the consummation of a merger, reorganization, consolidation, or share transfer which results in our voting securities outstanding immediately before the transaction (or the voting securities issued with respect to our voting securities outstanding immediately before the transaction) representing less than a majority of the combined voting power of the voting securities of the company or the surviving or acquiring entity or (c) the closing of the transfer (whether by merger, consolidation, or otherwise), in one transaction or a series of related transactions, to a person

or group of affiliated persons of securities of the company if, after closing, the transferee person or group would hold 50% or more of the outstanding voting power of the company (or the surviving or acquiring entity). However, consideration to be paid or received by a holder of common stock in connection with any such assets sale, merger, reorganization, consolidation, or share transfer under any employment, consulting, severance, or other arrangement will be disregarded for the purposes of determining whether holders of common stock are treated equally and identically.

Subdivisions and Combinations. If we subdivide or combine in any manner outstanding shares of Class A common stock or Class B common stock, the outstanding shares of the other classes will be subdivided or combined in the same manner.

No Preemptive or Similar Rights

Our Class A common stock and Class B common stock are not entitled to preemptive rights, and are not subject to conversion, redemption or sinking fund provisions, except for the conversion provisions with respect to the Class B common stock described below.

Conversion

Each share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock. After the closing of this offering, on any transfer of shares of Class B common stock, whether or not for value, each such transferred share will automatically convert into one share of Class A common stock, except for certain transfers detailed below and further described in our amended and restated certificate of incorporation that will be in effect following the closing of this offering.

Any holder's shares of Class B common stock will convert automatically into Class A common stock, on a one-to-one basis, upon certain circumstances, including: (1) the sale or transfer of such shares of Class B common stock, other than to a "controlled entity," which is any person or entity which, directly or directly, is controlled by, or is under common control with, the holder of such shares of Class B common stock; (2) the twenty-year anniversary of the filing of the certificate of amendment to our ninth amended and restated certificate of incorporation, which is March 15, 2041; (3) the termination of Mr. Lefkofsky's employment or service with us as an executive officer and member of our board of directors; and (4) the date that Mr. Lefkofsky and his controlled entities hold, in the aggregate, fewer than 10,000,000 shares of our capital stock (as adjusted for stock splits, stock dividends, combinations, subdivisions and recapitalizations).

Once transferred and converted into Class A common stock, the Class B common stock may not be reissued.

Fully Paid and Non-Assessable

In connection with this offering, our legal counsel will opine that the shares of our Class A common stock to be issued under this offering will be fully paid and non-assessable.

Convertible Promissory Note

In June 2020, in connection with our entry into an agreement for use of Google LLC's, or Google's, Google Cloud Platform, we issued Google a convertible promissory note, or the Note, in the original principal amount of $330 million. In November 2020, in connection with our Series G-2 convertible preferred stock financing, we issued Google $80 million of our Series G-2 preferred stock in partial satisfaction of the outstanding principal amount under the Note, and we amended and restated the terms of the Note. Under the amended and restated Note, or the Amended Note, the outstanding principal amount accrues interest at the rate set forth therein, and the principal amount is automatically reduced each year based on a formula taking into account the aggregate value of the Google Cloud Platform services used by us. As of September 30, 2023, the value of the Amended Note was

$198.9 million. The outstanding principal and accrued interest under the Note, or the Outstanding Amount, is due and payable on the earlier of (1) March 22, 2026, which is the maturity date of the Amended Note, (2) the occurrence and continuance of an event of default and (3) the occurrence of an acceleration event, which includes any termination by us of our Google Cloud Platform agreement. If the Amended Note is outstanding at the maturity date, Google may, at its option, convert the then outstanding principal amount and interest accrued under the Amended Note into a number of shares of our Class A common stock equal to the quotient obtained by dividing (1) the Outstanding Amount on the maturity date, by (2) the average of the last trading price on each trading day during the twenty day period ending immediately prior to the maturity date. We generally may not prepay the Outstanding Amount, except that we may, at our option, prepay the Outstanding Amount in an amount such that the principal amount remaining outstanding after such repayment is $150 million.

Warrant

In November 2021, in connection with our entry into an MSA with AstraZeneca, we issued a warrant to AstraZeneca to purchase $100 million in shares of our Class A common stock at an exercise price equal to the initial public offering price in this offering. The number of shares of Class A common stock issuable upon exercise of the warrant will be determined based on the initial public offering price in this offering (shares of Class A common stock, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus). The warrant may be exercised any time following the date that is 180 days following the pricing of our initial public offering through December 31, 2026. AstraZeneca will be entitled to substantially the same registration rights with respect to the shares under the warrant as those granted to holders of registrable securities pursuant to our Ninth Amended and Restated Investors' Rights Agreement, dated November 19, 2020. The warrant will be automatically cancelled and terminated for no consideration, if not previously exercised, in the event AstraZeneca declines to extend its financial commitment under the MSA before December 31, 2024, as more fully described in the section of this prospectus titled "Business—Operations—Our Strategic Collaboration with AstraZeneca."

Preferred Stock

As of September 30, 2023, there were 62,740,708 shares of our convertible preferred stock outstanding. upon the closing of this offering, each outstanding share of our convertible preferred, other than our Series B convertible preferred stock, will convert into one share of our Class A common stock, and each outstanding share of our Series B convertible preferred stock will convert into one share of our Class B common stock. In addition, upon the closing of this offering, we expect to issue additional shares of Class A common stock upon the conversion of all of our outstanding shares of our preferred stock, pursuant to provisions of our certificate of incorporation as currently in effect, assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, which we refer to as the Additional Class A Conversion Shares. See "Prospectus Summary—The Offering" for additional information.

Under our amended and restated certificate of incorporation that will be in effect on the closing of this offering, our board of directors may, without further action by our stockholders (except as noted below), fix the rights, preferences, privileges, and restrictions of up to an aggregate of 20,000,000 shares of preferred stock in one or more series and authorize their issuance. Notwithstanding the foregoing, so long as any shares of Class B common stock remain outstanding, no shares of preferred stock with voting rights equal or superior to those of the Class B common stock may be issued without the approval of the holders of a majority of the outstanding shares of Class B common stock. These rights, preferences, and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of our Class A common stock or Class B common stock. Any issuance of our preferred stock could adversely affect the voting power of holders of our Class A common stock or Class B common stock, and the likelihood that such holders would receive dividend payments and payments on liquidation. In addition, the issuance of preferred

stock could have the effect of delaying, deferring, or preventing a change of control or other corporate action. On the closing of this offering, no shares of preferred stock will be outstanding. We have no present plan to issue any shares of preferred stock.

Options

As of September 30, 2023, we had outstanding a stock option to purchase 210,000 shares under the 2015 Plan.

Restricted Stock Units (RSUs)

As of September 30, 2023, we had outstanding 20,719,695 RSUs under the 2015 Plan.

Performance-Vesting Restricted Stock Units (PSUs)

As of September 30, 2023, we had outstanding 17,450 PSUs under the 2015 Plan.

Registration Rights

Stockholder Registration Rights

We are party to an investor rights agreement that provides that certain holders of our convertible preferred stock, including certain holders of at least 5% of our capital stock and entities affiliated with certain of our directors, have certain registration rights, as set forth below. This investor rights agreement was entered into in November 2020. The registration of shares of our Class A common stock (including shares of Class A common stock issuable upon conversion of Class B common stock, along with all Additional Class A Conversion Shares) by the exercise of registration rights described below would enable the holders to sell these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We will pay the registration expenses, other than underwriting discounts and commissions, of the shares registered by the demand, piggyback, and Form S-3 registrations described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include. The demand, piggyback, and Form S-3 registration rights described below will expire five years after the effective date of the registration statement, of which this prospectus forms a part, or with respect to any particular stockholder, such time after the effective date of the registration statement that such stockholder (a) holds less than 1% of our outstanding common stock (including shares issuable on conversion of outstanding convertible preferred stock) and (b) can sell all of its shares under Rule 144 of the Securities Act, or Rule 144, during any 90-day period.

See "Prospectus Summary—The Offering" for a description of the Additional Class A Conversion Shares, as the number of Additional Class A Conversion Shares that will be issued depends on the initial public offering price of our Class A common stock.

Demand Registration Rights

The holders of an aggregate of shares of our Class A common stock and Class B common stock (assuming no exercise of the underwriters' option to purchase additional shares from selling stockholders to cover over-allotments, if any, in this offering and assuming the issuance of the Additional Class A Conversion Shares) will be entitled to certain demand registration rights. At any time beginning six months after the effective date of this registration statement, the holders of a majority of these shares may, on not more than two occasions, request that we register all or a portion of their shares. Such request for registration must cover shares with an anticipated aggregate offering price, net of underwriting discounts and commissions, of at least $15.0 million.

Piggyback Registration Rights

In connection with this offering, the holders of an aggregate of shares of our Class A common stock and Class B common stock (assuming no exercise of the underwriters' option to purchase additional shares from selling stockholders to cover over-allotments, if any, in this offering and assuming the issuance of the Additional Class A Conversion Shares) were entitled to, and the necessary percentage of holders waived, their rights to notice of this offering and to include their shares of registrable securities in this offering. After this offering, in the event that we propose to, subject to limited exceptions, register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the holders of these shares will be entitled to certain piggyback registration rights allowing the holder to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a demand registration or a registration statement on Forms S-4 or S-8, the holders of these shares are entitled to notice of the registration and have the right to include their shares in the registration, subject to limitations that the underwriters may impose on the number of shares included in the offering.

Form S-3 Registration Rights

The holders of an aggregate of at least 20% of the then outstanding shares of Class A common stock and Class B common stock (assuming no exercise of the underwriters' option to purchase additional shares from selling stockholders to cover over-allotments, if any, in this offering and assuming the issuance of the Additional Class A Conversion Shares) will be entitled to certain Form S-3 registration rights. The holders of an aggregate of at least 20% of these shares can make a request that we register their shares on Form S-3 if we are qualified to file a registration statement on Form S-3 and if the reasonably anticipated aggregate gross proceeds of the shares offered would equal or exceed $1.0 million. We will not be required to effect more than two registrations on Form S-3 within any 12-month period.

Anti-Takeover Provisions

Certificate of Incorporation and Bylaws to Be in Effect on the Closing of this Offering

Because our stockholders do not have cumulative voting rights, stockholders holding a majority of the voting power of our shares of common stock will be able to elect all of our directors. Our amended and restated certificate of incorporation and amended and restated bylaws to be effective on the closing of this offering will provide for stockholder actions at a duly called meeting of stockholders or, so long as any shares of Class B common stock remain outstanding, by written consent. A special meeting of stockholders may be called by a majority of our board of directors, the chair of our board of directors, our chief executive officer, or, so long as any shares of Class B common stock remain outstanding, by our secretary upon written consent of our stockholders entitled to cast at least a majority of the votes at such meeting. Our amended and restated bylaws to be effective on the closing of this offering will establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors.

Our amended and restated certificate of incorporation to be effective on the closing of this offering will further provide for a dual-class common stock structure, which provides Eric Lefkofsky, our Chief Executive Officer, Founder, and Chairman, who will beneficially own 100% of our outstanding Class B common stock, with control over all matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets. Additionally, so long as any shares of Class B common stock remain outstanding, a majority vote of the outstanding Class B common stock is required to (1) amend, alter, or repeal any provision of the certificate of incorporation or bylaws in a manner that impacts the rights of the holders of the Class B common stock, (2) reclassify any outstanding shares of Class A common stock into shares having (a) dividend or liquidation rights that are senior to the Class B common stock or (b) the right to more than one vote per share, (3) issue any shares of preferred stock having voting rights equal

or superior to those of the Class B common stock, and (4) issue any additional shares of Class B common stock or other securities convertible into Class B common stock (except for the issuance of Class B common stock issuable upon a dividend under certain circumstances).

The foregoing provisions will make it more difficult for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated convertible preferred stock makes it possible for our board of directors to issue convertible preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions, including the dual-class structure of our common stock, are intended to preserve our existing control structure after the closing of this offering, facilitate our continued product innovation and the risk-taking that it requires, permit us to continue to prioritize our long-term goals rather than short-term results, enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of us. These provisions are also designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of deterring hostile takeovers or delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts.

Section 203 of the Delaware General Corporation Law

When we have a class of voting stock that is either listed on a national securities exchange or held of record by more than 2,000 stockholders, we will be subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, subject to certain exceptions.

Choice of Forum

Our amended and restated certificate of incorporation to be effective on the closing of this offering will provide that the Court of Chancery of the State of Delaware be the exclusive forum for actions or proceedings brought under Delaware statutory or common law: (1) any derivative claim or cause of action brought on our behalf; (2) any claim or cause of action asserting a breach of fiduciary duty; (3) any claim or cause of action against us arising under the Delaware General Corporation Law; (4) any claim or cause of action arising under or seeking to interpret our amended and restated certificate of incorporation or our amended and restated bylaws; or (5) any claim or cause of action against us that is governed by the internal affairs doctrine. The provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act. Our amended and restated certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause or causes of action arising under the Securities Act, including all causes of action asserted against any defendant to such complaint. For the avoidance of doubt, this provision is intended to benefit and may be enforced by us, our officers and directors, the underwriters to any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering. Investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder.

Limitations of Liability and Indemnification

See the section titled “Executive Compensation—Limitations of Liability and Indemnification Matters.”

Exchange Listing

Our Class A common stock is currently not listed on any securities exchange. We have applied to have our Class A common stock approved for listing on the Nasdaq Global Select Market under the symbol “TEM.”

Transfer Agent and Registrar

On the closing of this offering, the transfer agent and registrar for our Class A common stock and Class B common stock will be American Stock Transfer & Trust Company, LLC. The transfer agent’s address is 6201 15th Avenue, Brooklyn, New York 11219, and its telephone number is (800) 937-5449.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our Class A common stock. Future sales of substantial amounts of our Class A common stock or Class B common stock, including shares issued on the settlement of outstanding RSUs, in the public market after this offering, or the possibility of these sales or issuances occurring, could adversely affect the prevailing market price for our Class A common stock or impair our ability to raise equity capital.

Based on our shares outstanding as of September 30, 2023, on the closing of this offering, a total of shares of Class A common stock and 5,374,899 shares of Class B common stock will be outstanding, assuming the automatic conversion of (1) all of our outstanding shares of convertible preferred stock, other than our Series B convertible preferred stock, into an aggregate of shares of Class A common stock, including the Additional Class A Conversion Shares (assuming an initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus), (2) all of our outstanding shares of Series B convertible preferred stock into an aggregate of 5,374,899 shares of Class B common stock and (3) all of our outstanding shares of nonvoting common stock into 4,917,823 shares of Class A common stock. Of these shares, all of the Class A common stock sold in this offering by us, plus any shares sold by the selling stockholders on exercise of the underwriters' option to purchase additional Class A common stock to cover over-allotments, if any, will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are held by "affiliates," as that term is defined in Rule 144. See "Prospectus Summary—The Offering" for a description of the Additional Class A Conversion Shares, as the number of Additional Class A Conversion Shares that will be issued depends on the initial public offering price of our Class A common stock.

The remaining shares of Class A common stock and Class B common stock will be, and shares of Class A common stock issued on settlement of RSUs will be on issuance, "restricted securities," as that term is defined in Rule 144. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below. Restricted securities may also be sold outside of the United States to non-U.S. persons in accordance with Rule 904 of Regulation S.

Subject to the lock-up agreements described below and the provisions of Rule 144 or Regulation S under the Securities Act, as well as our insider trading policy, these restricted securities will be available for sale in the public market after the date of this prospectus.

Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements of Section 13 or Section 15(d) of the Exchange Act for at least 90 days, an eligible stockholder is entitled to sell such shares without complying with the manner of sale, volume limitation or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. To be an eligible stockholder under Rule 144, such stockholder must not be deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and must have beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144, subject to the expiration of the lock-up agreements described below.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell shares on expiration of the lock-up agreements described below, subject, in the case of restricted securities, to such shares having been beneficially owned for at least six months. Beginning 90 days

after the date of this prospectus, within any three-month period, such stockholders may sell a number of shares that does not exceed the greater of:

- 1% of the number of shares of Class A common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average weekly trading volume of our Class A common stock on the Nasdaq Stock Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

Rule 701 under the Securities Act, or Rule 701, generally allows a stockholder who was issued shares under a written compensatory plan or contract and who is not deemed to have been an affiliate of our company during the immediately preceding 90 days, to sell these shares in reliance on Rule 144, but without being required to comply with the public information, holding period, volume limitation or notice provisions of Rule 144. Rule 701 also permits affiliates of our company to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. All holders of Rule 701 shares, however, are required by that rule to wait until 90 days after the date of this prospectus before selling those shares under Rule 701, subject to the expiration of the lock-up agreements described below.

Form S-8 Registration Statements

We intend to file one or more registration statements on Form S-8 under the Securities Act with the SEC to register the offer and sale of shares of our Class A common stock that are issuable under the 2015 Plan, the 2024 Plan and the ESPP. These registration statements will become effective immediately on filing. Shares covered by these registration statements will then be eligible for sale in the public markets, subject to vesting restrictions, any applicable lock-up agreements described below, and Rule 144 limitations applicable to affiliates.

Lock-Up Arrangements

We, all of our directors, executive officers, the selling stockholders and the holders of substantially all of our common stock and securities exercisable for or convertible into our common stock outstanding immediately on the closing of this offering, have agreed, or will agree, with the underwriters that, until 180 days after the date of this prospectus, or the restricted period, subject to certain exceptions, we and they will not, without the prior written consent of Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of any of our shares of common stock, any options or warrants to purchase any of our shares of common stock or any securities convertible into or exchangeable for or that represent the right to receive shares of our common stock. These agreements are described in the section titled "Underwriting." Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC may release any of the securities subject to these lock-up agreements at any time, subject to applicable notice requirements.

In addition to the restrictions contained in the lock-up agreements described above, we have entered into agreements with substantially all of our security holders that contain market stand-off provisions imposing restrictions on the ability of such security holders to offer, sell or transfer our equity securities for a period of 180 days following the date of this prospectus.

Registration Rights

Upon the closing of this offering, the holders of shares of our Class A common stock and of all shares of our Class B common stock, or their transferees, will be entitled to certain rights with respect to the

registration of the offer and sale of their shares under the Securities Act. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act immediately on the effectiveness of the registration. See the section titled "Description of Capital Stock—Registration Rights" for additional information.

Rule 10b5-1 Plans

After this offering, certain of our employees, including our executive officers, and/or directors may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to the offering described above.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES OF NON-U.S. HOLDERS OF OUR CLASS A COMMON STOCK

The following summary describes certain material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the acquisition, ownership, and disposition of our Class A common stock acquired in this offering. This discussion is not a complete analysis of all potential U.S. federal income tax consequences relating thereto, and does not address foreign, state, and local tax consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address U.S. federal tax consequences (such as gift and estate taxes) other than income taxes. This discussion is limited to Non-U.S. Holders that hold our Class A common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the alternative minimum tax, the special tax accounting rules under Section 451(b) of the Code and the Medicare contribution tax on net investment income. Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Code, such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers, and traders in securities, U.S. expatriates, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, corporations organized outside of the United States, any state thereof or the District of Columbia that are nonetheless treated as U.S. taxpayers for U.S. federal income tax purposes, persons that hold our Class A common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security," or integrated investment or other risk reduction strategy, persons who acquire our Class A common stock through the exercise of an option or otherwise as compensation, "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds, partnerships, and other pass-through entities or arrangements and investors in such pass-through entities or arrangements. Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local, and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury Regulations, rulings, and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked, or modified, perhaps retroactively, so as to result in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the IRS with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This discussion is for informational purposes only and is not tax advice. Persons considering the purchase of our Class A common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income, estate, and other tax consequences of acquiring, owning, and disposing of our Class A common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local, or foreign tax consequences.

For the purposes of this discussion, a "Non-U.S. Holder" is, for U.S. federal income tax purposes, a beneficial owner of Class A common stock that is neither a U.S. Holder, nor a partnership (or other entity treated as a partnership for U.S. federal income tax purposes regardless of its place of organization or formation). A "U.S. Holder" means a beneficial owner of our Class A common stock that is for U.S. federal income tax purposes any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation or other entity treated as a corporation for U.S. federal income tax purposes created or organized in or under the laws of the United States, any state thereof, or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

Distributions

Distributions, if any, made on our Class A common stock to a Non-U.S. Holder to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) generally will constitute dividends for U.S. tax purposes and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty, subject to the discussions below regarding effectively connected income, backup withholding, and foreign accounts. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us with a properly executed IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities), or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. This certification must be provided to us and/or our paying agent prior to the payment of dividends and must be updated periodically. In the case of a Non-U.S. Holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to us and/or our paying agent, either directly or through other intermediaries. If a Non-U.S. Holder is eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty and such Non-U.S. Holder does not timely file the required certification, such Non-U.S. Holder may be able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base that such holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular rates applicable to U.S. Holders. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments. Non-U.S. Holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

To the extent distributions on our Class A common stock, if any, exceed our current and accumulated earnings and profits, they will first reduce the Non-U.S. Holder's adjusted basis in our Class A common stock, but not below zero, and then will be treated as gain to the extent of any excess amount distributed, and taxed in the same manner as gain realized from a sale or other disposition of Class A common stock as described in the next section.

Gain on Disposition of Our Class A Common Stock

Subject to the discussions below regarding backup withholding and foreign accounts, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other taxable disposition of our Class A common stock unless (a) the gain is effectively connected with a trade or business of such holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base that such holder maintains in the United States), (b) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (c) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period in our Class A common stock. In general, we would be a United States real property holding corporation if our interests in U.S. real property comprise (by fair market value) at least half of our worldwide real property interests and our other assets used or held for use in a trade or

business. We believe that we are not, and do not anticipate becoming, a United States real property holding corporation. Even if we are treated as a United States real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our Class A common stock will not be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly, and constructively, no more than 5% of our Class A common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our Class A common stock is regularly traded on an established securities market, as defined in applicable Treasury Regulations. There can be no assurance that our Class A common stock will qualify as regularly traded on an established securities market. If a Non-U.S. Holder's gain on disposition of our Class A common stock is taxable because we are a United States real property holding corporation and such Non-U.S. Holder's ownership of our Class A common stock exceeds 5%, such Non-U.S. Holder will be taxed on such disposition generally in the manner as gain that is effectively connected with the conduct of a U.S. trade or business (subject to the provisions under an applicable income tax treaty), except that the branch profits tax generally will not apply to a corporate Non-U.S. Holder.

Non-U.S. Holders described in (a) above will be required to pay tax on the net gain derived from the sale at regular U.S. federal income tax rates applicable to U.S. Holders, and corporate Non-U.S. Holders described in (a) above may be subject to the additional branch profits tax on such gain at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. Gain described in (b) above will be subject to U.S. federal income tax at a flat 30% rate, which gain may be offset by certain U.S.-source capital losses (even though a Non-U.S. Holder is not considered a resident of the United States), provided that the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

Information Reporting Requirements and Backup Withholding

Generally, we must report information to the IRS with respect to any distributions we pay on our Class A common stock (even if the payments are exempt from withholding), including the amount of any such distributions, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such distributions are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E, or IRS Form W-ECI, or otherwise establishes an exemption. Notwithstanding the foregoing, backup withholding may apply if the payor has actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our Class A common stock effected by or through a U.S. office of any broker, U.S. or foreign, except that information reporting and such requirements may be avoided if the holder provides a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E or otherwise meets documentary evidence requirements for establishing non-U.S. person status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be credited against the tax liability of persons subject to backup withholding, provided that the required information is timely furnished to the IRS.

Foreign Accounts

Sections 1471 through 1474 of the Code (commonly referred to as FATCA) impose a U.S. federal withholding tax of 30% on certain payments to a foreign financial institution (as specifically defined by applicable rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). FATCA also generally imposes a federal withholding tax of 30% on certain payments to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding substantial direct and indirect U.S. owners of the entity. An intergovernmental agreement between the United States and an applicable foreign country may modify those requirements. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules.

FATCA withholding currently applies to payments of dividends, if any, on our Class A common stock and, subject to the proposed Treasury Regulations described in this paragraph, generally also would apply to payments of gross proceeds from the sale or other disposition of our Class A common stock. The U.S. Treasury Department released proposed regulations which, if finalized in their present form, would eliminate the federal withholding tax of 30% applicable to the gross proceeds of a disposition of our Class A common stock. In its preamble to such proposed regulations, the U.S. Treasury Department stated that taxpayers may generally rely on the proposed regulations until final regulations are issued. Non-U.S. holders are encouraged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in our Class A common stock.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING, AND DISPOSING OF OUR CLASS A COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY RECENT OR PROPOSED CHANGE IN APPLICABLE LAW FROM ALL FEDERAL, STATE, ESTATE, AND GIFT TAX PERSPECTIVES.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, J.P. Morgan Securities LLC and Allen & Company LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares of Class A common stock indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
J.P. Morgan Securities LLC	
Allen & Company LLC	
BofA Securities, Inc.	
Cowen and Company, LLC	
Stifel, Nicolaus & Company, Incorporated	
William Blair & Company, L.L.C.	
Loop Capital Markets LLC	
Needham & Company, LLC	
Total:	

The underwriters and the representatives are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of Class A common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of Class A common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of Class A common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

The underwriters initially propose to offer part of the shares of Class A common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ per share under the initial public offering price. After the initial offering of the shares of Class A common stock, the offering price and other selling terms may from time to time be varied by the representatives.

The selling stockholders identified in this prospectus have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of Class A common stock at the initial public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of Class A common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of Class A common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of Class A common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total initial public offering price, underwriting discounts and commissions, and proceeds before expenses to us and the selling stockholders. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares of Class A common stock.

	Per Share	Total No Exercise	Total Full Exercise
Initial public offering price	$	$	$
Underwriting discounts and commissions to be paid by:			
Us	$	$	$
The selling stockholders	$	$	$
Proceeds, before expenses, to us	$	$	$
Proceeds, before expenses, to selling stockholders	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $ million. We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority up to $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of Class A common stock offered by them. We have applied to list our Class A common stock on the Nasdaq Global Select Market under the trading symbol "TEM."

We and all directors and officers and the holders of substantially all of our outstanding stock and stock options will agree that, subject to certain conditions, without the prior written consent of the representatives on behalf of the underwriters, we and they will not, and will not publicly disclose an intention to, during the period ending on and including the 180th day after the date of this prospectus, referred to as the restricted period:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock;
- file any registration statement with the Securities and Exchange Commission, or the SEC, relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock,

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each such person will agree that, without the prior written consent of the representatives on behalf of the underwriters, we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph do not apply to:

- the sale of shares to the underwriters;
- transactions by any person other than us relating to shares of Class A common stock or other securities acquired in this offering or in open market transactions after the completion of this offering, provided that no filing under the Exchange Act, or other public announcement, reporting a reduction in beneficial ownership of shares of Class A common stock is required or voluntarily made in connection with subsequent sales of Class A common stock or other securities acquired in this offering or in such open market transactions during the restricted period;
- transfers of shares of common stock or any security convertible into or exercisable or exchangeable for common stock (i) as a bona fide gift, (ii) to an immediate family member or to any trust for the direct or indirect benefit of the holder or an immediate family member of the holder, (iii) to any corporation,

partnership, limited liability company, investment fund, trust or other entity controlled or managed, or under common control or management by, the holder, or (iv) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or an immediate family member of the holder, provided that, in the case of any such transfer, (a) each transferee shall sign and deliver a lock-up agreement and (b) no filing under the Exchange Act, or other public announcement, reporting a reduction in beneficial ownership of shares of common stock is required or voluntarily made during the restricted period;

- if the holder is a corporation, partnership, limited liability company, trust or other business entity, transfers or distributions of shares of common stock or any security convertible into or exercisable or exchangeable for common stock to general or limited partners, managers or members, stockholders, other equityholders or direct or indirect affiliates (within the meaning of Rule 405 under the Securities Act) of the undersigned or to the estates of any of the foregoing, provided that (i) each transferee or distributee shall sign and deliver a lock-up agreement and (ii) no filing under the Exchange Act, or other public announcement, reporting a reduction in beneficial ownership of shares of common stock is required or voluntarily made during the restricted period;
- the transfer to the company of shares of common stock or any securities convertible into or exercisable or exchangeable for common stock to satisfy any tax, including estimated tax, remittance, or other payment obligations of the holder arising in connection with a vesting event of the company's securities, upon the settlement of restricted stock units or the payment due for the exercise of options or other rights to purchase securities of the company (including, in each case, by way of a "cashless" or "net exercise" basis and any transfer to the company necessary in respect of such amount needed for the payment of taxes, including estimated taxes, and remittance payments due as a result of such vesting, settlement or exercise including by means of a "net settlement," "sell to cover" or otherwise), in all such cases pursuant to equity awards granted under a stock incentive plan or other equity award plan of the company described in this prospectus, provided that (i) any remaining shares of common stock received upon such vesting, settlement or exercise are subject to the aforementioned restrictions, (ii) no filing under the Exchange Act, or other public announcement, shall be voluntarily made during the restricted period and (iii) any filing required under the Exchange Act shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this bullet;
- the establishment of a trading plan on behalf of a stockholder, officer or director of the company pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that (i) such plan does not provide for the transfer of common stock during the restricted period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of the holder or the company regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of common stock may be made under such plan during the restricted period;
- the transfer of shares of common stock or any security convertible into or exercisable or exchangeable for common stock that occurs by operation of law pursuant to a qualified domestic order or in connection with a divorce settlement or other court order, provided that (i) the transferee shall sign and deliver a lock-up agreement and (ii) no filing under the Exchange Act, or other public announcement, shall be required or shall be voluntarily made during the restricted period (other than any filing required under Section 16(a) of the Exchange Act that shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this bullet);
- the conversion of shares of the company's convertible preferred stock or Class B common stock into shares of Class A common stock as described in this prospectus, provided that, in each case (i) such shares shall continue to be subject to the aforementioned restrictions on transfer and (ii) no filing under the Exchange Act, or other public announcement, shall be required or voluntarily made during the restricted period (other than any filing required under Section 16(a) of the Exchange Act that clearly indicates in the footnotes thereto that the filing relates to the circumstances described in this bullet);

- the transfer of shares of common stock or any security convertible into or exercisable or exchangeable for common stock pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by the board of directors of the company, made to all holders of common stock involving a change of control, provided that, in the event that the tender offer, merger, consolidation or other such transaction is not completed, the common stock owned by the holder shall remain subject to the aforementioned restrictions; or
- any transfer of shares of common stock or any security convertible into or exercisable or exchangeable for common stock pledged in a bona fide transaction to third parties as collateral to secure obligations pursuant to lending or other arrangements in effect as of the date hereof between such third parties (or their affiliates or designees) and the holder or its affiliates or any similar arrangement relating to a financing arrangement for the benefit of the holder or its affiliates, provided that (i) any such pledgee or other party shall, upon foreclosure on the pledged securities, sign and deliver a lock-up agreement and (ii) no filing under the Exchange Act, or any other public filing or disclosure, of such transfer by or on behalf of the holder, shall be required or shall be voluntarily made during the restricted period.

Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC, in their joint discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time, subject to applicable notice requirements. In addition, in the event that any officer, director or other holder holding in excess of 1% of our outstanding shares of common stock is granted an early release from the lock-up restrictions with respect to our securities in an aggregate amount in excess of 1% of our outstanding shares of common stock (whether in one or multiple releases), then every other person subject to lock-up automatically will be granted an equivalent early release from its obligations under the lock-up agreement on a pro rata basis. Such release (i) shall not be applicable if it is effected solely to permit a transfer not for consideration and the transferee has agreed in writing to be bound by the restrictions described above, and (ii) in certain cases, in the event of an underwritten public offering during the restricted period, shall only apply with respect to the holder's participation in the underwritten offering. Notwithstanding any other provisions of the lock-up agreement, in certain cases, if Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC, in their sole judgment, determine that a holder of any securities that is a natural person should be granted an early release from a lock-up agreement due to circumstances of an emergency or hardship, then no other holder shall have any right to be granted an early release from the lock-up agreement.

In order to facilitate the offering of the Class A common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the Class A common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the Class A common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of Class A common stock in the open market to stabilize the price of the Class A common stock. These activities may raise or maintain the market price of the Class A common stock above independent market levels or prevent or retard a decline in the market price of the Class A common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time. Any such stabilization activities will be conducted in accordance with Regulation M.

We, the selling stockholders and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of Class A common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

Other Relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our Class A common stock. The initial public offering price will be determined by negotiations between us and the representatives. Among the factors to be considered in determining the initial public offering price are our future prospects and those of our industry in general, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area, each a Member State, no securities have been offered or will be offered pursuant to the offering to the public in that Member State prior to the publication of a prospectus in relation to the securities which has been approved by the competent authority in that Member State or, where appropriate, approved in another Member State and notified to the competent authority in that Member State, all in accordance with the Prospectus Regulation, except that offers of securities may be made to the public in that Member State at any time under the following exemptions under the Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), subject to obtaining the prior consent of the representatives; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any of our representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the representatives and us that it is a "qualified investor" as defined in the Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in Article 5 of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged, and agreed that the shares acquired by it in the offer have not been acquired on a nondiscretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an "offer of shares to the public" in relation to any shares in any Member State means the communication in any form and by means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase shares, the expression "Prospectus Regulation" means Regulation (EU) 2017/1129 (as amended).

United Kingdom

In relation to the United Kingdom, no securities have been offered or will be offered pursuant to this offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the securities that either (i) has been approved by the Financial Conduct Authority, or (ii) is to be treated as if it had been approved by the Financial Conduct Authority in accordance with the transitional provision in Regulation 74 of the Prospectus (Amendment etc.) (EU Exit) Regulations 2019, except that offers of securities may be made to the public in the United Kingdom at any time under the following exemptions under the UK Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined in Article 2 of the UK Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined in Article 2 of the UK Prospectus Regulation), subject to obtaining the prior consent of the Representative for any such offer; or

(c) in any other circumstances falling within section 86 of the Financial Services and Markets Act 2000, as amended, or the FMSA,

provided that no such offer of shares shall require the issuer or any underwriter to publish a prospectus pursuant to section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation.

For the purposes of this provision, the expression an "offer of shares to the public" in relation to any shares in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase or subscribe for any shares, and the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

Each underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, or FSMA, received by it in connection with the issue or sale of the shares of our Class A common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our Class A common stock in, from or otherwise involving the United Kingdom.

Canada

The shares of Class A common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus

Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares of Class A common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended), or the FIEL, has been made or will be made with respect to the solicitation of the application for the acquisition of the shares of Class A common stock.

Accordingly, the shares of Class A common stock have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors ("QII")

Please note that the solicitation for newly issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of Class A common stock constitutes either a "QII only private placement" or a "QII only secondary distribution" (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of Class A common stock. The shares of Class A common stock may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of Class A common stock constitutes either a "small number private placement" or a "small number private secondary distribution" (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of Class A common stock. The shares of Class A common stock may only be transferred en bloc without subdivision to a single investor.

Hong Kong

Shares of our Class A common stock may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the

Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong) ("Companies (Winding Up and Miscellaneous Provisions) Ordinance") or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong) ("Securities and Futures Ordinance"), or (ii) to "professional investors" as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to shares of our Class A common stock may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares of our Class A common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our Class A common stock may not be circulated or distributed, nor may the shares of our Class A common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA")) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where shares of our Class A common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for six months after that corporation has acquired shares of our Class A common stock under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation's securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore ("Regulation 32").

Where shares of our Class A common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferable for 6 months after that trust has acquired shares of our Class A common stock under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

Solely for purposes of the notification requirements under Section 309B(1)(c) of the Securities and Futures Act, Chapter 289 of Singapore, the shares of our Class A common stock are "prescribed capital markets products" (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

LEGAL MATTERS

The validity of the shares of Class A common stock being offered by this prospectus will be passed upon for us by Cooley LLP, Chicago, Illinois. Certain legal matters in connection with this offering will be passed upon for the underwriters by Davis Polk & Wardwell LLP, Menlo Park, California.

EXPERTS

The financial statements as of December 31, 2022 and 2021, and for each of the two years in the period ended December 31, 2022, included in this prospectus, have been so included in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of Class A common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all the information set forth in the registration statement, some of which is contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our Class A common stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The SEC maintains an internet website that contains reports and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

On the closing of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements, and other information with the SEC. These reports, proxy statements, and other information will be available at www.sec.gov.

We also maintain a website at www.tempus.com. Information contained in, or accessible through, our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is only as an inactive textual reference.

Tempus Labs, Inc.
Financial Statements
Table of Contents

Report of Independent Registered Public Accounting Firm	F-2
Consolidated Financial Statements	
Consolidated Balance Sheets	F-3
Consolidated Statements of Operations and Comprehensive Loss	F-5
Consolidated Statements of Cash Flows	F-6
Consolidated Statements of Redeemable Convertible Preferred Stock, Common Stock and Stockholders' Deficit	F-8
Notes to Consolidated Financial Statements	F-10-F-48

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Tempus Labs, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Tempus Labs, Inc. and its subsidiaries (the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of operations and comprehensive loss, of redeemable convertible preferred stock, common stock and stockholders' deficit, and of cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2022.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP
Chicago, Illinois
April 28, 2023

We have served as the Company's auditor since 2019.

Tempus Labs, Inc.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	December 31, 2021	December 31, 2022	September 30, 2023 (unaudited)
Assets			
Current Assets			
Cash and cash equivalents	$ 277,686	$ 302,938	$ 132,706
Accounts receivable, net of allowances of $284, $2,942 and $2,372 at December 31, 2021 and 2022 and September 30, 2023, respectively	82,244	88,684	112,565
Inventory	22,908	22,282	27,157
Prepaid expenses and other current assets	17,291	19,450	22,127
Deferred offering costs	3,859	5,275	6,306
Total current assets	$ 403,988	$ 438,629	$ 300,861
Property and equipment, net	35,395	44,105	63,138
Goodwill	15,985	53,100	63,741
Intangible assets, net	37,286	37,278	24,835
Investments and other assets	6,853	8,830	9,140
Warrant asset, less current portion	31,067	24,948	19,987
Finance lease right-of-use assets	—	283	—
Operating lease right-of-use assets	—	23,398	21,547
Restricted cash	780	793	822
Total Assets	$ 531,354	$ 631,364	$ 504,071
Liabilities, Convertible redeemable preferred stock, and Stockholders' deficit			
Current Liabilities			
Accounts payable	33,753	45,987	58,970
Accrued expenses	40,694	55,272	66,461
Deferred revenue	16,454	50,142	51,943
Other current liabilities	—	2,355	6,992
Operating lease liabilities	—	6,070	6,468
Contingent consideration	8,005	—	—
Finance lease liabilities	419	288	—
Accrued data licensing fees	8,500	8,500	6,292
Deferred rent	1,356	—	—
Accrued dividends	5,625	5,625	6,912
Total current liabilities	$ 114,806	$ 174,239	$ 204,038
Finance lease liabilities, less current portion	291	—	—
Operating lease liabilities, less current portion	—	37,125	33,545
Minimum accrued data licensing fees, less current portion	12,905	6,613	738
Convertible promissory note	238,236	221,094	198,874
Deferred rent, less current portion	13,426	—	—
Warrant liability	37,800	42,500	34,500
Other long-term liabilities	—	9,604	16,289
Interest payable	23,090	39,485	51,209
Long-term debt, net	—	168,452	220,485
Deferred revenue, less current portion	—	35,136	17,453
Total Liabilities	$ 440,554	$ 734,248	$ 777,131

	December 31, 2021	December 31, 2022	September 30, 2023 (unaudited)
Commitments and contingencies (Note 6)			
Convertible redeemable preferred stock, $0.0001 par value, 64,760,746, 65,441,289, and 65,441,289, shares authorized at December 31, 2021 and 2022 and September 30, 2023, respectively; 61,078,813, 62,692,927 and 62,740,708 shares issued and outstanding at December 31, 2021 and 2022 and September 30, 2023, respectively; aggregate liquidation preference of $913,138, $1,043,757, and $1,072,867 at December 31, 2021 and 2022 and September 30, 2023, respectively	898,291	1,026,143	1,051,637
Stockholders' deficit			
Voting Common Stock, $0.0001 par value, 187,075,184 shares authorized at December 31, 2021 and 2022 and September 30, 2023, respectively, 58,367,961 shares issued and outstanding at December 31, 2021 and 2022 and September 30, 2023, respectively	$ 6	$ 6	$ 6
Non-voting Common Stock, $0.0001 par value, 63,946,627, 66,946,627, and 66,946,627 shares authorized at December 31, 2021 and 2022 and September 30, 2023, respectively; 4,612,450 and 4,932,415 shares issued and outstanding at December 31, 2021 and 2022, respectively, and 5,063,289 shares issued and 4,917,823 shares outstanding at September 30, 2023	0	0	0
Treasury Stock, 145,466 shares at September 30, 2023, at cost	—	—	(3,602)
Additional paid-in capital	—	9,251	13,556
Accumulated Other Comprehensive (Loss) Income	(11)	18	(11)
Accumulated deficit	(807,486)	(1,138,302)	(1,334,646)
Total Stockholders' deficit	$ (807,491)	$ (1,129,027)	$ (1,324,697)
Total Liabilities, Convertible redeemable preferred stock, and Stockholders' deficit	$ 531,354	$ 631,364	$ 504,071

The accompanying notes are an integral part of these consolidated financial statements.

Tempus Labs, Inc.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands, except share and per share amounts)

	Year Ended December 31,		Nine Months Ended September 30,	
	2021	2022	2022	2023
			(unaudited)	
Net revenue				
Genomics	$ 195,012	$ 197,984	$ 140,055	$ 270,797
Data and services	62,841	122,684	79,987	113,301
Total net revenue	$ 257,853	$ 320,668	$ 220,042	$ 384,098
Cost and operating expenses				
Cost of revenues, genomics	162,276	150,255	108,752	138,781
Cost of revenues, data and services	11,933	40,227	29,503	40,690
Technology research and development	67,190	79,093	58,258	70,485
Research and development	61,161	83,158	61,552	66,268
Selling, general and administrative	199,004	233,377	168,804	211,662
Total cost and operating expenses	501,564	586,110	426,869	527,886
Loss from operations	$ (243,711)	$ (265,442)	$ (206,827)	$ (143,788)
Interest income	623	3,032	889	5,864
Interest expense	(15,184)	(21,894)	(12,671)	(33,245)
Other (expense) income, net	(316)	(4,846)	(4,453)	7,909
Loss before provision for income taxes	$ (258,588)	$ (289,150)	$ (223,062)	$ (163,260)
Provision for income taxes	—	(66)	—	(74)
Losses from equity method investments	(604)	(595)	(464)	(301)
Net Loss	$ (259,192)	$ (289,811)	$ (223,526)	$ (163,635)
Accretion of convertible preferred stock to redemption value	(106)	(301)	(301)	—
Dividends on Series A, B, B-1, B-2, C, D, E, F, G and G-3 preferred shares	(35,758)	(40,975)	(30,415)	(32,709)
Cumulative Undeclared Dividends on Series C preferred shares	(2,680)	(2,841)	(2,125)	(2,230)
Net loss attributable to common shareholders, basic and diluted	(297,736)	(333,928)	(256,367)	(198,574)
Net loss per share attributable to common shareholders, basic and diluted	$ (4.73)	$ (5.30)	$ (4.07)	$ (3.14)
Weighted-average shares outstanding used to compute net loss per share, basic and diluted	62,975	63,032	62,980	63,267
Comprehensive Loss				
Net loss	$ (259,192)	$ (289,811)	$ (223,526)	$ (163,635)
Foreign currency translation adjustment	(10)	29	97	(29)
Comprehensive loss	$ (259,202)	$ (289,782)	$ (223,429)	$ (163,664)

The accompanying notes are an integral part of these consolidated financial statements.

Tempus Labs, Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands, except share and per share amounts)

	Year Ended December 31,		Nine Months Ended September 30,	
	2021	2022	2022	2023
			(unaudited)	
Operating activities				
Net loss	$ (259,192)	$ (289,811)	$ (223,526)	$ (163,635)
Adjustments to reconcile net loss to net cash used in operating activities				
Change in fair value of warrant	$ —	$ 4,700	$ 4,200	$ (8,000)
Amortization of original issue discount	—	238	—	778
Amortization of deferred financing fees	—	139	—	382
Change in fair value of contingent consideration	5,234	(3,701)	(3,881)	(400)
Amortization of warrant asset	1,517	4,720	4,034	4,961
Depreciation and amortization	23,881	30,029	21,780	24,509
Provision for bad debt expense	268	3,867	2,216	1,538
Provision for obsolete inventory	—	1,938	1,938	—
Stock compensation expense	559	—	—	—
Loss from equity-method Investments	604	595	464	301
Amortization of finance right-of-use lease assets	—	381	286	283
Non-cash operating lease costs	—	6,427	4,820	5,077
Minimum accretion expense	594	455	340	292
Impairment of intangible assets	—	—	—	7,359
PIK interest added to principal	—	—	—	2,123
Change in assets and liabilities				
Accounts receivable	4,747	(8,203)	9,926	(25,365)
Inventory	14,649	(1,312)	(59)	(4,875)
Prepaid expenses and other current assets	(597)	(1,094)	(202)	(3,665)
Investments and other assets	(1,927)	(2,296)	(2,849)	(4,378)
Accounts payable	(30,474)	(7,915)	(8,502)	(12,253)
Deferred revenue	9,489	67,626	65,695	(16,644)
Accrued data licensing fees	(7,801)	(6,746)	(5,000)	(8,374)
Accrued expenses & other	11,362	22,803	11,752	20,749
Interest payable	15,103	16,395	12,263	11,724
Operating lease liabilities	—	(7,439)	(5,405)	(6,559)
Net cash used in operating activities	$ (211,984)	$ (168,204)	$ (109,710)	$ (174,072)
Investing activities				
Purchases of property and equipment	$ (11,767)	$ (18,377)	$ (16,464)	$ (31,899)
Investment in unconsolidated subsidiary	(5,957)	—	—	—
Cash paid for escrow related to AKESOgen purchase (Note 3)	(4,000)	—	—	—
Business combinations, net of cash acquired (Note 3)	—	(39,562)	(35,549)	(2,869)
Net cash used in investing activities	$ (21,724)	$ (57,939)	$ (52,013)	$ (34,768)
Financing activities				
Issuance of Series G-2 Preferred Stock, net of offering costs	$ 8,894	$ —	$ —	$ —
Issuance of Series G-3 Preferred Stock, net of offering costs	—	92,199	92,199	—
Principal payments on finance lease liabilities	(796)	(375)	(280)	(288)
Payment of contingent consideration	(3,380)	—	—	—
Purchase of treasury stock	—	—	—	(3,602)

	Year Ended December 31,		Nine Months Ended September 30,	
	2021	2022	2022	2023
			(unaudited)	
Payment of deferred offering costs	(1,132)	(2,883)	(1,697)	(574)
Payment of deferred financing fees	—	(2,550)	(2,251)	—
Dividends paid	(5,625)	(5,625)	(5,625)	(5,625)
Proceeds from long-term debt, net of original issue discount	—	170,625	170,625	48,750
Net cash (used in) provided by financing activities	$ (2,039)	$ 251,391	$ 252,971	$ 38,661
Effect of foreign exchange rates on cash	$ (3)	$ 17	$ 117	$ (24)
Net (decrease) increase in Cash, Cash Equivalents and Restricted Cash	$ (235,750)	$ 25,265	$ 91,365	$ (170,203)
Cash, cash equivalents and restricted cash, beginning of period	514,216	278,466	278,466	303,731
Cash, cash equivalents and restricted cash, end of period	$ 278,466	$ 303,731	$ 369,831	$ 133,528
Cash, Cash Equivalents and Restricted Cash are Comprised of:				
Cash and cash equivalents	$ 277,686	$ 302,938	$ 369,045	$ 132,706
Restricted cash and cash equivalents	780	793	786	822
Total cash, cash equivalents and restricted cash	$ 278,466	$ 303,731	$ 369,831	$ 133,528
Supplemental disclosure of cash flow information				
Cash paid during the year for interest	$ 80	$ 4,664	$ 24	$ 12,293
Cash paid for income taxes	$ 3	$ 6	$ 5	$ 101
Supplemental disclosure of noncash investing and financing activities				
Dividends payable	$ 5,625	$ 5,625	$ 4,219	$ 6,912
Purchases of property and equipment, accrued but not paid	$ 984	$ 2,408	$ 642	$ 5,049
Deferred offering costs, accrued but not yet paid	$ 2,727	$ 2,391	$ 2,330	$ 2,849
Redemption of convertible promissory note	$ 11,764	$ 17,142	$ 10,221	$ 22,220
Non-voting common stock issued in connection with business combination	$ —	$ 4,947	$ —	$ 4,305
Accretion of convertible preferred stock to redemption value	$ 106	$ 301	$ 301	$ —
Non-voting common stock issued in connection with contingent consideration	$ —	$ 4,304	$ —	$ —
Operating lease liabilities arising from obtaining right-of-use assets	$ —	$ 41,815	$ 41,815	$ 1,097
Finance lease liabilities arising from obtaining right-of-use assets	$ —	$ 664	$ 664	$ —
Issuance of Series G-3 Preferred Stock	$ —	$ —	$ —	$ 2,738
Deferred financing fees, accrued but not yet paid	$ —	$ —	$ 299	$ —

The accompanying notes are an integral part of these consolidated financial statements.

Tempus Labs, Inc., and Subsidiaries
CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK, COMMON STOCK AND STOCKHOLDERS' DEFICIT

	Redeemable Convertible Preferred Stock		Voting Common Stock		Non-voting Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Deficit
	Units	Amount	Units	Amount	Units	Amount				
Balance at January 1, 2021	60,921,767	$ 859,156	58,367,961	$ 6	4,595,000	$ 0	$ 0	$ (512,989)	$ (1)	$ (512,984)
Issuance of Series G-2 Preferred Stock, net of stock issuance costs of $106	157,046	8,894	—	—	—	—	—	—	—	—
Stock compensation related to RSU	—	—	—	—	—	—	559	—	—	559
Accretion of convertible preferred stock to redemption value	—	106	—	—	—	—	(106)	—	—	(106)
Settlement of Common Shares	—	—	—	—	17,450	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	(10)	(10)
Dividends	—	30,135	—	—	—	—	(453)	(35,305)	—	(35,758)
Net loss	—	—	—	—	—	—	—	(259,192)	—	(259,192)
Balance at December 31, 2021	61,078,813	$ 898,291	58,367,961	$ 6	4,612,450	$ 0	—	$ (807,486)	$ (11)	$ (807,491)
Issuance of Series G-3 Preferred Stock, net of stock issuance costs of $301	1,614,114	92,199	—	—	—	—	—	—	—	—
Accretion of convertible preferred stock to redemption value	—	301	—	—	—	—	(301)	—	—	(301)
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	29	29
Dividends	—	35,352	—	—	—	—	301	(41,276)	—	(40,975)
Common stock issued in connection with contingent consideration	—	—	—	—	145,466	0	4,304	—	—	4,304
Common stock issued in connection with business combination	—	—	—	—	174,499	0	4,947	—	—	4,947
Impact of adoption of Topic 842	—	—	—	—	—	—	—	271	—	271
Net loss	—	—	—	—	—	—	—	(289,811)	—	(289,811)
Balance at December 31, 2022	62,692,927	$1,026,143	58,367,961	$ 6	4,932,415	$ 0	$ 9,251	$ (1,138,302)	$ 18	$ (1,129,027)

Tempus Labs, Inc., and Subsidiaries
CONSOLIDATED STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK, COMMON STOCK AND STOCKHOLDERS' DEFICIT

	Redeemable Convertible Preferred Stock		Voting Common Stock		Non-voting Common Stock		Treasury Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Deficit
	Units	Amount	Units	Amount	Units	Amount	Units	Amount				
Balance at December 31, 2021	61,078,813	$ 898,291	58,367,961	$ 6	4,612,450	$ 0	$ —	$ —	—	$ (807,486)	$ (11)	$ (807,491)
Issuance of Series G-3 Preferred Stock, net of stock issuance costs of $301	1,614,114	92,199	—	—	—	—	—	—	—	—	—	—
Impact of adoption of Topic 842	—	—	—	—	—	—	—	—	—	271	—	271
Accretion of convertible preferred stock to redemption value	—	301	—	—	—	—	—	—	(301)	—	—	(301)
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	—	97	97
Dividends	—	26,196	—	—	—	—	—	—	301	(30,716)	—	(30,415)
Net loss	—	—	—	—	—	—	—	—	—	(223,526)	—	(223,526)
Balance at September 30, 2022	62,692,927	$1,016,987	58,367,961	$ 6	4,612,450	$ 0	$ —	$ —	$ —	$ (1,061,457)	$ 86	$ (1,061,365)

	Redeemable Convertible Preferred Stock		Voting Common Stock		Non-voting Common Stock		Treasury Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Deficit
	Units	Amount	Units	Amount	Units	Amount	Units	Amount				
Balance at December 31, 2022	62,692,927	$1,026,143	58,367,961	$ 6	4,932,415	$ 0	$ —	$ —	9,251	$ (1,138,302)	$ 18	$ (1,129,027)
Issuance of Series G-3 Preferred Stock	47,781	2,738	—	—	—	—	—	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	—	(29)	(29)
Dividends	—	22,756	—	—	—	—	—	—	—	(32,709)	—	(32,709)
Repurchase of Non-voting Common Stock	—	—	—	—	—	—	(145,466)	(3,602)	—	—	—	(3,602)
Common stock issued in connection with business combination	—	—	—	—	130,874	0	—	—	4,305	—	—	4,305
Net loss	—	—	—	—	—	—	—	—	—	(163,635)	—	(163,635)
Balance at September 30, 2023	62,740,708	$1,051,637	58,367,961	$ 6	5,063,289	$ 0	$(145,466)	$ (3,602)	$ 13,556	(1,334,646)	$ (11)	$ (1,324,697)

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF BUSINESS

Company Information

Tempus Labs, Inc., together with the subsidiaries through which it conducts business (the "Company"), is a healthcare technology company focused on bringing artificial intelligence and machine learning to healthcare in order to improve the care of patients across multiple diseases. The Company combines the results of laboratory tests with other multimodal datasets to improve patient care by supporting all parties in the healthcare ecosystem, including: physicians, researchers, payors, and pharmaceutical companies. The Company primarily derives revenue from selling comprehensive genetic testing to physicians and large academic research institutions, licensing data to third parties, matching patients to clinical trials, and related services.

The Company, based in Chicago, Illinois, was founded by Eric P. Lefkofsky, the Company's CEO and Executive Chairman, and evolved from a business Mr. Lefkofsky founded called Bioin. Bioin originally was established as a limited liability company. Effective September 21, 2015, Bioin converted its legal form to a corporation organized and existing under the General Corporation Law of the State of Delaware. Bioin subsequently changed its legal name to Tempus Health, Inc. in September 2015 and, ultimately, to Tempus Labs, Inc. in October 2016.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation and Basis of Presentation

The consolidated financial statements include the accounts of Tempus Labs, Inc. and its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. The consolidated financial statements and accompanying notes were prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") and include the assets, liabilities, revenue and expenses of all wholly owned subsidiaries. Investments in unconsolidated entities in which the Company does not have a controlling financial interest, but has the ability to exercise significant influence, are accounted for under the equity method of accounting. Investments in unconsolidated entities in which the Company is not able to exercise significant influence are accounted for under the cost method of accounting.

The Company believes that its existing cash and cash equivalents at September 30, 2023, inclusive of proceeds from the Series G-4 Financing and additional Ares term debt received in October 2023, will be sufficient to allow the Company to fund its current operating plan through at least a period of one year from the date of issuance. As the Company continues to incur losses, its transition to profitability is dependent upon a level of revenues adequate to support the Company's cost structure. Future capital requirements will depend on many factors, including the timing and extent of spending on research and development activities and growth related expenditures.

Reclassification

Certain prior year amounts have been reclassified for consistency with the current year presentation.

Emerging Growth Company

The Company is an "emerging growth company" as defined in Section 2(a) of the Securities Act of 1933, as amended, (the "Securities Act"), as modified by the Jumpstart our Business Startups Act of 2012, (the "JOBS Act"), and it may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Further, Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private companies, the Company, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of the Company's consolidated financial statements with another public company which is neither an emerging growth company nor an emerging growth company which has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Unaudited Interim Consolidated Financial Information

The accompanying interim consolidated balance sheet as of September 30, 2023, the consolidated statements of operations and comprehensive income (loss) for the nine months ended September 30, 2022 and 2023, redeemable convertible preferred stock, common stock and stockholders' deficit, and cash flows for the nine months ended September 30, 2022 and 2023, and the related footnote disclosures are unaudited. In management's opinion, the unaudited interim consolidated financial statements include all adjustments necessary to state fairly the Company's financial position as of September 30, 2023 and its results of operations for the nine months ended September 30, 2022 and 2023 and the cash flows for the nine months ended September 30, 2022 and 2023. The results of operations for the nine months ended September 30, 2023 are not necessary indicative of the results expected for the year ending December 31, 2023 or any other future period.

Use of Estimates

The preparation of the consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts and classifications of assets and liabilities, revenue and expenses, and the related disclosures of contingent assets and liabilities in the consolidated financial statements and accompanying notes. The most significant estimates are related to revenue, accounts receivable, stock-based compensation, operating lease liabilities, and the useful lives of property, equipment and intangible assets. Actual results could differ from those estimates.

COVID-19

Revenue from COVID-19 testing accounted for $94.7 million, or 36.7%, of our revenue in the year ended December 31, 2021, $22.2 million, or 6.9%, of our revenue in the year ended December 31, 2022, and $17.5 million, or 7.9%, of total revenue for the nine months ended September 30, 2022. Revenue from COVID-19 testing was $2.7 million, or 0.7% of total revenue, for the nine months ended September 30, 2023. Demand for, and revenue from, our COVID-19 testing products decreased in 2022 due to the lower prevalence of COVID-19 from successful containment efforts and increased vaccination rates of a substantial majority of Americans, reduced testing needs of many of our clients, and the entrance of other testing providers in the market. The Company stopped offering COVID-19 PCR diagnostic tests in the first quarter of 2023, at which time we shifted resources from COVID-19 testing to other aspects of the business.

Cash, Cash Equivalents and Restricted Cash

The Company considers all highly-liquid investments with an original maturity of three months or less from the date of purchase to be cash equivalents. Restricted cash primarily represents amounts that the Company is unable to access for operational purposes pursuant to a letter of credit with a financial institution in connection

with an equipment lease. The Company had $0.8 million of restricted cash as of December 31, 2021 and 2022, and September 30, 2023, respectively.

Accounts Receivable and Allowances

Accounts receivable primarily represents the net cash due from the Company's customers, including payors, pharmaceutical companies, and research institutions. Payments of accounts receivable are allocated to the specific invoices identified on the remittance advice. Accounts receivables are reported at their gross outstanding balance reduced by an allowance for doubtful accounts and contractual allowance. The allowance for doubtful accounts is based on the age of an invoice, historical payment trends, as well as forward looking data and current economic trends. The Company had an allowance for doubtful accounts of $0.3 million, $2.9 million and $2.4 million as of December 31, 2021 and 2022 and September 30, 2023, respectively.

Concentration of Credit Risk

Financial instruments that potentially expose the Company to concentrations of credit risk are primarily cash, restricted cash and accounts receivable. The Company maintains cash balances that may exceed the insured limits by the Federal Deposit Insurance Corporation. The Company has not experienced any losses on its deposits of cash.

The Company has credit risk regarding trade accounts receivable as the Company generally does not require collateral, and a limited number of customers have accounted for a large part of the Company's revenue and accounts receivable to date. Allowances are maintained for potential credit losses.

Revenue from one customer accounted for 7.2%, 8.3%, 6.9%, and 7.5% of the Company's revenues for the years ended December 31, 2021 and 2022, and the nine months ended September 30, 2022 and 2023, respectively. The amount due from this customer was approximately $9.7 million or 11.8%, $6.9 million or 7.8%, $0 or 0%, and $3.0 million or 2.7%, of accounts receivable as of December 31, 2021 and 2022, and September 30, 2022 and 2023, respectively.

Revenue from one other customer accounted for 5.4% of the Company's revenues for the nine months ended September 30, 2023. This customer did not represent a significant portion of total revenues for the years ended December 31, 2021 or 2022 or for the nine months ended September 30, 2022.

In the nine months ended September 30, 2022, revenue from two customers accounted for approximately 5.3% and 5.1% of our total revenues, respectively. The amounts due from these two customers, respectively, are approximately $5.6 million, or 7.7%, and $7.2 million, or 9.9%, of accounts receivable as of September 30, 2022. The same two customers did not represent a significant portion of total revenues for the years ended December 31, 2021 and 2022, or the nine months ended September 30, 2023.

Three additional customers did not represent a significant portion of total revenues for the years ended December 31, 2021 and 2022, or for the nine months ended September 30, 2022 or 2023 but accounted for $10.1 million or 11.4%, $6.3 million or 7.1%, and $6.1 million or 6.8%, respectively, of accounts receivable as of December 31, 2022. These three customers did not represent a significant portion of accounts receivable as of December 31, 2021 or September 30, 2022 or 2023.

One additional customer, which did not represent a significant portion of total revenues for the years ended December 31, 2021 or 2022 or for the nine months ended September 30, 2022 or September 30, 2023 accounted for $14.5 million, or 13.0%, of accounts receivable as of September 30, 2023. This additional customer did not represent a significant portion of accounts receivable as of December 31, 2021 or 2022 or as of September 30, 2022.

The Company also has concentration risk around revenue generated from COVID-19 testing. Revenue from COVID-19 testing was $94.7 million and $22.2 million or 36.7% and 6.9% of the Company's total revenues for the

years ended December 31, 2021 and 2022, respectively. Revenue from COVID-19 testing was $17.5 million, or 7.9%, of total revenue for the nine months ended September 30, 2022. Revenue from COVID-19 testing was not material for the nine months ended September 30, 2023.

Inventories

Inventories, consisting of supplies and consumables used in the lab, are accounted for using the first-in, first-out method of accounting and are valued at the lower of cost or net realizable value. The Company periodically reviews inventory for excess or obsolescence and writes-down obsolete or otherwise un-usable inventory to its estimated net realizable value. Amounts written-down due to obsolete inventory are charged to cost of revenues. For the year ended December 31, 2021, the Company recorded $5.1 million of inventory write-downs to Cost of revenues, genomics, primarily related to the expiration of COVID-19 testing kits and oncology lab supplies. For the year ended December 31, 2022 and for the nine months ended September 30, 2022, the Company increased its inventory reserve by $1.9 million related to the expiration of COVID-19 testing kits. As of December 31, 2021, the Company had approximately $22.2 million of inventory and $0.7 million of inventory in process in the labs. As of December 31, 2022, the Company had approximately $21.1 million of inventory and $1.2 million of inventory in process in the labs. As of September 30, 2023, the Company had approximately $25.6 million of inventory and $1.6 million of inventory in process in the labs.

The Company relies on a sole supplier for certain laboratory materials and equipment. Purchases from this supplier accounted for approximately 25% and 35% of total vendor payments for the year ended December 31, 2021 and 2022, respectively, and approximately 38% and 34% of total vendor payments for the nine months ended September 30, 2022 and 2023, respectively. Amounts due to this vendor approximated $0.9 million, $8.2 million, and $11.6 million at December 31, 2021 and 2022, and September 30, 2023, respectively.

Prepaid expenses and Other Current Assets

Prepaid assets are recorded when paid and consistent primarily of prepayments for insurance, medical, software subscriptions, and cloud storage service. Prepaid expenses are amortized into expense over the related service period. Other current assets included in this line are primarily related to the short-term portion of the Company's warrant asset and other receivables. Prepaid expenses and other current assets totaled $17.3 million, $19.5 million, and $22.1 million at December 31, 2021 and 2022, and September 30, 2023, respectively.

Long-Lived Assets

Property and Equipment and Intangibles

Property and equipment are stated at cost and assets under finance leases are stated at the lesser of the present value of minimum lease payments or their fair market value. Depreciation is recognized using the straight-line method over the estimated useful lives of the related assets. Generally, the useful lives are three years for equipment and seven years for furniture and fixtures. Leasehold improvements are amortized on a straight-line basis over the lesser of the term of the lease or the estimated useful life of the asset. Intangibles, other than indefinite-lived intangibles, are amortized using the straight-line method, which approximates the pattern of usage, over their economic life, generally five to seven years. Assets to be disposed of, if any, are separately presented in the consolidated balance sheet and reported at the lower of the carrying amount or fair value, less costs to sell, and are no longer depreciated. See Note 4, "Balance Sheet Components" for additional information about these assets.

Impairment of Long-Lived Assets

The Company evaluates long-lived assets, including property and equipment, and intangible assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of the asset

may not be fully recoverable. Recoverability is measured by a comparison of the carrying amount to the net undiscounted cash flows expected to be generated by the asset group. If such assets are impaired, the impairment to be recognized is measured by the amount by which the carrying amount of a long-lived asset exceeds its fair value. Any loss would be recognized in loss from operations in the period in which the determination is made. There were no impairment charges recognized related to long-lived assets during the years ended December 31, 2021 and 2022 or during the nine months ended September 30, 2022 and 2023.

Goodwill

Goodwill consists of the excess purchase price over the fair value of net assets acquired in business combinations. The Company conducts a test for the impairment of goodwill on at least an annual basis as of October 1st or sooner if indicators of impairment arise. The Company first assesses qualitative factors to determine whether it is more likely than not that goodwill is impaired. As part of the qualitative assessment, the Company evaluates factors including macroeconomic conditions, industry and market considerations, cost factors and overall financial performance of its single reporting unit.

If the Company concludes that it is more-likely-than-not that its single reporting unit is impaired or if the Company elects not to perform the optional qualitative assessment, a quantitative assessment is performed. For the quantitative assessment, the fair value of the Company's reporting unit is compared with the carrying amount of net assets, including goodwill, related to the reporting unit. The Company recognizes an impairment charge for the amount, if any, by which the carrying amount of a reporting unit exceeds the fair value of the reporting unit. The Company recorded no impairment loss during the years ended December 31, 2021 and 2022 or the nine months ended September 30, 2022 and 2023.

Term Loan

The Company's outstanding term loan (see Note 11) is accounted for in accordance with ASC 470. The original issue discount and deferred financing fees are amortized into interest expense within the consolidated statements of operations using the straight-line method over the term of the underlying debt, and unamortized amounts are presented net of the principal balance within long-term debt in the consolidated balance sheets.

Convertible Note

The Company's outstanding promissory note (see Note 11) is accounted for in accordance with ASC 470. The Company determined the embedded conversion options, redemption features, and acceleration of repayment upon default are not required to be separately accounted for as derivatives under ASC 815 because they were either determined to be clearly and closely related to the host instrument or the Company has concluded that no value would be associated with the related feature based on the circumstances associated with the note's issuance.

Leases

The Company determines whether an arrangement is or contains a lease at inception, and all significant lease arrangements are recognized at lease commencement. The majority of the Company's leases are operating leases and are included in operating lease right-of-use assets, operating lease liabilities, and operating lease liabilities, less current portion on the consolidated balance sheets. Finance leases are included in finance lease right-of-use, or ROU, assets, finance lease liabilities, and finance lease liabilities, less current portion on the consolidated balance sheets.

ROU assets represent the Company's right to use an underlying asset for the lease term, and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating and finance lease

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

ROU assets and operating and finance lease liabilities are recognized at commencement based on the present value of fixed payments not yet paid over the remaining lease term discounted using the Company's incremental borrowing rate. ROU assets also include any lease payments made at or before the lease commencement date, less lease incentives received and deferred rent. As the Company's leases do not provide an implicit rate, the incremental borrowing rate used is estimated based on what the Company would have to pay on a collateralized basis over a similar term as the lease.

The Company has lease arrangements with lease and non-lease components. The Company elected the practical expedient not to separate non-lease components from lease components for the Company's facility leases. Variable lease payments are presented as rent expense in the period in which they are incurred and consist primarily of our proportionate share of operating expenses, utilities, property taxes, insurance, common area maintenance and other facility-related expenses. The Company also elected to apply the short-term lease measurement and recognition exemption in which ROU assets and lease liabilities are not recognized for leases with terms of twelve months or less, and lease expense is recognized on a straight-line basis over the term of the short-term lease. The Company records rent expense in its consolidated statements of operations and comprehensive loss on a straight-line basis over the term of the lease and records variable lease payments as incurred. The Company's lease terms may include options to extend or terminate the lease, which the Company includes in calculating the operating lease liabilities if it is reasonably certain that the Company will exercise the option. As of December 31, 2022 and September 30, 2023, the Company's lease liabilities did not include any options to extend or terminate any of its leases.

Revenue Recognition

The Company derives revenue from selling lab services ("Genomics") to physicians, academic research institutions, and other parties. The Company also derives revenue from the commercialization of data generated in the lab ("Data and services") through the licensing of de-identified datasets to third parties and by providing clinical trial support, such as matching patients to clinical trials enrolled in its clinical trial network, and related services. The majority of the Company's revenue is generated in North America.

The Company accounts for revenue in accordance with ASC Topic 606, *Revenue From Contracts With Customers*. The Company commences revenue recognition when control of these products is transferred to customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for such products. This principle is achieved by applying the five-step approach:

(i) we account for a contract when it has approval and commitment from both parties, (ii) the rights of the parties are identified, (iii) payment terms are identified, (iv) the contract has commercial substance and (v) collectability of consideration is probable. Revenues and any contract assets are not recognized until such time that the required conditions are met.

Disaggregation of Revenue

The Company provides disaggregation of revenue based on Genomics and Data and services on the consolidated statements of operations and comprehensive loss, as it believes these best depict how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors.

Genomics

The Company generally recognizes revenue for its Genomics product offering when it has met its performance obligation relating to an order. The Company has determined its sole performance obligation to be the delivery of the testing results to the ordering party. The Company receives payments from Medicare, Medicaid, and commercial insurance for clinical orders and directly from research institutions, pharmaceutical

companies or other third parties for direct bill orders. The Company recognized Genomics revenue of $195.0 million and $198.0 million for the years ended December 31, 2021 and 2022, respectively. The Company recognized Genomics revenue of $140.1 million and $270.8 million for the nine months ended September 30, 2022 and 2023, respectively.

For clinical orders from Medicare, Medicaid, and commercial insurance, the Company determines transaction price by reducing the standard charge by the estimated effects of any variable consideration, such as contractual allowance and implicit price concessions. The Company estimates the contractual allowances and implicit price concessions based on historical collections in relation to established rates, as well as known current or anticipated reimbursement trends not reflected in the historical data. Estimates are inclusive of the consideration to which we will be entitled at an amount for which it is probable that a reversal of cumulative consideration will not occur. The Company monitors the estimated amount to be collected at each reporting period based on actual cash collections in order to assess whether a revision to the estimate is required. Payment is typically due after the claim has been processed by the payor, generally 30-120 days from date of service. While management believes that the estimates are accurate, actual results could differ and the potential impact on the financial statements could be significant. The Company recognized revenue for clinical orders of $151.1 million and $157.2 million for the years ended December 31, 2021 and 2022, respectively. The Company recognized revenue for clinical orders of $110.5 million and $245.2 million for the nine months ended September 30, 2022 and 2023, respectively.

For direct bill orders from research institutions, pharmaceutical companies, or other third parties, the Company determines the transaction prices based on established contractual rates with the customer, net of any applicable discounts. Payment is typically due between 30 and 60 days following the date of invoice. The Company recognized Genomics revenue for direct bill orders of $43.9 million and $40.8 million for the years ended December 31, 2021 and 2022, respectively. The Company recognized Genomics revenue for direct bill orders of $29.6 million and $25.6 million for the nine months ended September 30, 2022 and 2023, respectively.

Data and services

Data and services revenue primarily represents data licensing and clinical trial services that the Company provides to pharmaceutical and biotechnology companies. The Company's arrangements with these customers often have terms that span multiple years. However, these contracts generally also include customer opt-in or early termination clauses after twelve months without contractual penalty. The customer's option to renew is generally not viewed as a material right, and as a result, the Company's contract period for these agreements is generally considered less than one year. The Company determines the transaction price based on established contractual rates with the customer, net of any applicable discounts. The Company recognizes revenue for its Data and services product offering when it has met its performance obligation under the terms of the agreement with the customer. A description of the Company's two product offerings are as follows:

Insights

The Company's Insights product consists primarily of licensing and analysis of de-identified records. Each Insights contract is unique and may include multiple promises, including the delivery of licensed de-identified records, including refreshes, analytical services or access to the Company's enhanced Lens application. The Company evaluates each contract to determine which performance obligations are capable of being distinct and separately identifiable from other promises in the contract and, therefore, represent distinct performance obligations. The transaction price is allocated to the distinct performance obligations and revenue is recognized once the performance obligation has been fulfilled. The standalone selling prices are based on the Company's normal pricing practices when sold separately with consideration of market conditions and other factors, including customer demographics.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company has determined that the delivery of de-identified records and, when applicable, analytical services, and access to its enhanced Lens application are separate and distinct performance obligations. A description of the primary Insights contract types are as follows:

- *Data licensing on a one-time or limited duration basis* – Customer licenses a specific dataset of records, and the Company accounts for individual licensed data records as a right to use license. Revenue is typically recognized upon delivery of the data to the customer, as the Company's obligations for an individual record is complete once the data has been delivered, and the customer is able to benefit from the provision of data as it is received.
- *Multi-year data subscriptions* – Customer licenses an interchangeable maximum number of de-identified records, and the Company accounts for the service as a right to access license and one performance obligation. Revenue is recognized as access to the dataset is provided, ratably over-time, with the measure of progress time-based.
- *Analytical services and other services* – Services typically involve data analysis and research performed on behalf of the customer by the Company. The resulting delivery of data, or a report addressing a series of questions and analytical results, is considered a single performance obligation. Revenue is generally recognized upon the delivery of these services, as defined by the contract.
- *Enhanced Lens application subscription services* – Customer licenses access to the Company's enhanced Lens application under a software-as-a-service model. Customers do not have the right to take possession of the Lens platform application, and the online software product is fully functional once a customer has access. Lens subscription revenues are recognized ratably over the contract terms beginning on the date the Company's service is made available to the customer. For the periods presented, revenue from Lens subscription services are not material.

The Company recognized revenue from Insights products of $56.0 million and $90.1 million for the years ended December 31, 2021 and 2022, respectively. The Company recognized revenue from Insights products of $56.9 million and $78.4 million for the nine months ended September 30, 2022 and 2023, respectively.

Trials

The Company's Trials product includes TIME clinical trial matching services, and other clinical trial services.

TIME consists primarily of matching patients to clinical trial sponsors of a potential match. To the extent the contract requires, the Company may also assist in opening the clinical trial site and enrolling the patient in the clinical trial. The Company has determined that, depending on the type of agreement, the performance obligation of these contracts is the delivery of a notification or the enrollment of a patient in a clinical trial. As such, revenue is recognized upon one of the following: delivery of a notification to the physician alerting them to a clinical trial match, or once a patient is enrolled in a trial. Concurrently, the customer, which is the clinical trial sponsor, also receives notification from the Company to establish the performance obligations delivered or fulfilled for the billing period.

In addition to TIME, the Company provides other clinical trial services conducting or supporting studies. In January 2022, the Company expanded these services through acquisition of Highline Consulting, LLC (now Tempus Compass), a contract research organization, or CRO, which manages and executes early and late-stage clinical trials, primarily in oncology. Contracts for clinical trial services can take the form of fee-for-service or fixed-price contracts. Fee-for-service contracts are typically priced based on time and materials, and revenue is recognized based on hours and materials used as the services are provided. Fixed-price contracts generally represent a single performance obligation and are recognized over-time using a cost-based input method. Progress on the performance obligation is measured by the proportion of actual costs incurred to the total costs expected to complete the contract. This cost-based method of revenue recognition requires the Company to make

estimates of costs to complete its projects on an ongoing basis. Contract costs principally include direct labor and reimbursable out-of-pocket costs.

The Company recognized revenue from Trials products of $6.0 million and $31.2 million for the years ended December 31, 2021 and 2022, respectively. The Company recognized revenue from Trials products of $21.9 million and $31.6 million for the nine months ended September 30, 2022 and 2023, respectively.

For Insights and Trials arrangements, pricing is fixed and the Company may be compensated through a combination of an upfront payment and performance-based, non-refundable payments due upon completion of the stated performance obligation(s). Payment is generally due 60 to 90 days after the date of service. The Company has no significant obligations for refunds, warranties, or similar obligations for Data and services product offerings. The Company has elected the practical expedient, which allows the Company to not disclose remaining performance obligations for contracts with original terms of twelve months or less. Cancelable contracted revenue is not considered a remaining performance obligation. The Company recognized Data and services revenue from pharmaceutical companies, not-for-profits, and researchers of $62.8 million and $122.7 million for the years ended December 31, 2021 and 2022, respectively. The Company recognized Data and services revenue from pharmaceutical companies, not-for-profits, and researchers of $80.0 million and $113.3 million for the nine months ended September 30, 2022 and 2023, respectively.

Multi-year contract performance obligations

The Company has limited multi-year contracts that do not contain early termination or customer opt-in clauses. These contracts contain defined, noncancelable performance obligations that will be fulfilled in future years. The Company's remaining performance obligations related to multi-year contracts was $129.1 million as of December 31, 2022, respectively, of which the Company expects to recognize approximately 42% of its remaining performance obligations as revenue next year, and the remaining 39%, and 19%, of its remaining performance obligations as revenue in years two and three, and respectively. The Company's remaining performance obligations related to these contracts was $116.5 million as of September 30, 2023, of which the Company expects to recognize approximately 58% as revenue over the next year, and the remaining 35%, and 7%, of its remaining performance obligations as revenue in years two and three, and respectively.

Contract Assets

Timing of revenue recognition may differ from the timing of invoicing to customers. Certain performance obligations may require payment before delivery of the service to the customer. The Company recognizes contract assets when we have an unconditional right to payment, and when revenues earned on a contract exceeds the billings. Contract assets are presented under accounts receivable, net. Accounts receivable as of December 31, 2021 and December 31, 2022 and September 30, 2023 included contract assets of $18.5 million, $7.6 million, and $4.3 million, respectively.

During the fourth quarter of 2021, and in conjunction with the signing of a November 2021 Master Services Agreement ("the MSA") with customer AstraZeneca AB ("AstraZeneca"), the Company recognized a contract asset for consideration payable concurrent with the issuance of the common stock warrant based on applicable authoritative guidance in Financial Accounting Standards Board ("FASB") ASC 606 *Revenue from Contracts with Customers*. The contract asset was initially measured equal to the initial fair value of the warrant liability based on the authoritative guidance under FASB ASC 718 *Compensation—Stock Compensation.* As revenue is recognized over the period of the contractual commitment of the MSA, the associated contract asset amortization is recorded as reduction of revenue. At each reporting period, the short-term portion of the warrant asset is adjusted based on the financial commitment and reclassified to Prepaids expenses and other current assets.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The following summarized the warrant contract asset presentation as of December 31, 2021 and 2022 and September 30, 2023 (in thousands):

	December 31, 2021	December 31, 2022	September 30, 2023
Prepaid expenses and other current assets	$ 5,216	$ 6,615	$ 6,615
Warrant asset, less current portion	31,067	24,948	19,987
Total warrant contract asset	$ 36,283	$ 31,563	$ 26,602

Deferred Revenue

Deferred revenue consists of billings or cash received for services in advance of revenue recognition and is recognized as revenue when all the Company's revenue recognition criteria are met. The deferred revenue balance is influenced primarily by upfront contractual payments from our Data and Services product offerings and timing of delivery of our de-identified licensed data and clinical test results. The portion of deferred revenue that is anticipated to be recognized as revenue during the succeeding twelve-month period is recorded as deferred revenue, current and any remaining portion is recorded as deferred revenue, non-current. The Company recognized $7.0 million and $13.8 million during the years ended December 31, 2021 and 2022, respectively, that was included in deferred revenue at the beginning of the period. For the nine months ended September 30, 2022 and 2023, the Company recognized revenue of $10.4 million and $35.7 million, respectively, that was included in the corresponding deferred revenue balance at the beginning of the periods.

Cost of Revenues, Genomics

Cost of revenues for Genomics consists of personnel lab expenses, including salaries, bonuses, employee benefits, amortization of intangible assets, cost of laboratory supplies and consumables, laboratory rent expense, third-party administration fees associated with COVID-19 testing, depreciation of laboratory equipment, shipping costs and certain allocated overhead expenses. Costs associated with performing the Company's tests are recorded as the tests are processed at the time of report delivery.

Cost of Revenues, Data and services

Cost of revenues for Data and services includes data acquisition and royalty fees, and personnel costs related to our delivery of our data services and platform, cloud costs, and certain allocated overhead expenses. Costs associated with performing data services are recorded as incurred.

Technology research and development

Technology research and development expense primarily includes personnel costs incurred related to the research and development of the Company's technology platform and applications and the research and development of new products which the Company hopes to bring to the market. Technology research and development costs are expensed as incurred.

Research and Development

Research and development expenses include costs incurred to develop new assays and products, and include salaries and benefits of the Company's scientific and laboratory research and development teams, amortization of intangible assets, inventory costs, overhead costs, validation costs, contract services and other related costs**.** Research and development costs are expensed as incurred.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

401(k) Plan

The Company has a 401(k) tax deferred savings plan under which eligible employees may elect to have a portion of their salary deferred and contributed to the plan. Employer matching contributions are determined by the Company and are discretionary. During the years ended December 31, 2021 and 2022 and the nine months ended September 30, 2022 and 2023, the Company did not match any employee contributions.

Income Taxes

Income taxes are provided for the tax effects of transactions reported in the consolidated financial statements and consist of taxes currently due plus deferred taxes. Deferred taxes are recognized based on differences between the basis of assets and liabilities for financial reporting and income tax purposes and are measured using enacted rates. The differences relate primarily to timing of deductibility of certain expenses and the estimated future effects of net operating loss carryforwards. Deferred tax assets and liabilities represent the future tax consequences of those differences, which will either be taxable or deductible when the assets and liabilities are recovered or settled. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment.

Companies are required to assess whether a valuation allowance should be recorded against their deferred tax assets ("DTAs") based on the consideration of all available evidence, using a "more likely than not" realization standard. The four sources of taxable income that must be considered in determining whether DTAs will be realized are, (1) future reversals of existing taxable temporary differences (i.e., offset of gross deferred tax assets against gross deferred tax liabilities); (2) taxable income in prior carryback years, if carryback is permitted under the tax law; (3) tax planning strategies and (4) future taxable income exclusive of reversing temporary differences and carry forwards.

In assessing whether a valuation allowance is required, significant weight is given to evidence that can be objectively verified. The Company has evaluated its DTAs in each reporting period, including an assessment of its cumulative income or loss, to determine if a valuation allowance was required. After a review of the four sources of taxable income described above, the Company established a valuation allowance against the Company's net deferred tax assets due to uncertainty surrounding the Company's ability to generate future taxable income to realize these assets.

As of December 31, 2022, the Company had tax effected federal and state net operating loss ("NOL") carry forwards of approximately $164.0 million and $32.8 million, respectively, which may be available to offset future taxable income. The NOLs will begin to expire in 2037.

The Company evaluates tax positions under an approach for recognition and measurement of uncertain tax positions. The Company recognizes tax liabilities when the Company believes that certain positions may not be fully sustained upon review by tax authorities. Benefits from tax positions are measured at the largest amount of benefit that is more likely than not of being realized upon settlement. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences impact income tax expense in the period in which such determination is made. Interest and penalties, if any, related to accrue liabilities for potential tax assessments are included in income tax expense.

The Company has concluded that as of December 31, 2021 and 2022 and September 30, 2023, there are no uncertain positions taken or expected to be taken that would require recognition of a liability in the financial statements.

The Company is subject to routine audits by taxing jurisdictions. As of December 31, 2022 and September 30, 2023, the Company was not under audit in any jurisdiction.

Net Loss Per Share Attributable to Common Stockholders

Basic and diluted net loss per share attributable to common stockholders is presented in conformity with the two-class method required for participating securities. The Company considers all series of its redeemable

convertible preferred stock to be participating securities. Under the two-class method, the net loss attributable to common stockholders is not allocated to the redeemable convertible preferred stock as the holders of its redeemable convertible preferred stock do not have a contractual obligation to share in the Company's losses. Net income is attributed to common stockholders and participating securities based on their participation rights. Basic net loss per share attributable to common stockholders is computed by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period. Diluted earnings per share attributable to common stockholders adjusts basic earnings per share for the potentially dilutive impact of stock options and redeemable convertible preferred stock. As the Company has reported losses for all periods presented, all potentially dilutive securities are antidilutive and accordingly, basic net loss per share equals diluted net loss per share.

Deferred Offering Costs

Deferred offering costs consist primarily of accounting, legal, and other fees related to the Company's proposed initial public offering ("IPO"). The deferred offering costs will be recorded against IPO proceeds upon the consummation of the IPO. If the IPO is abandoned, deferred offering costs will be expensed in the period the IPO is abandoned. The Company had $3.9 million, $5.3 million, and $6.3 million of deferred offering costs as of December 31, 2021 and 2022 and September 30, 2023, respectively.

Stock-Based Compensation

Compensation expense relating to share-based payments is recognized in operations using a fair value measurement method. Under the fair value method, the estimated fair value of awards is charged to operations on a straight-line basis over the requisite service period, which is generally the vesting period. See Note 10 for further information on stock-based compensation.

Fair Value Measurements

Fair value is defined under GAAP as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is a market- based measurement that is determined based on assumptions that market participants would use in pricing an asset or a liability.

To increase the comparability of fair value measures, the following hierarchy prioritizes the inputs in valuation methodologies used to measure fair value:

Level 1—Measurements that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2—Measurements that include other inputs that are directly or indirectly observable in the marketplace.

Level 3—Measurements derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Fair value measurements are discussed further in Note 14.

It is the Company's policy, in general, to measure nonfinancial assets and liabilities at fair value on a nonrecurring basis. These items are not measured at fair value on an ongoing basis but are subject to fair value adjustments in certain circumstances (such as evidence of impairment) which, if material, are disclosed in the accompanying notes to these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Warrant Liability

The Company issued a warrant to its customer AstraZeneca in conjunction with the signing of a November 2021 MSA. The warrant to purchase up to $100 million in shares of the Company's Class A common stock is a freestanding financial instrument classified as noncurrent liability on the Company's consolidated balance sheets. Warrants are accounted for as liability-classified instruments based on an assessment of the warrant's specific terms and applicable authoritative guidance in FASB ASC 480, *Distinguishing Liabilities from Equity (*"ASC 480"). The fair value of the warrant liability is measured each reporting period and any change in fair value of the warrant liability is recorded in Other expense, net within the consolidated statements of operations.

Segment Information

The Company operates as one operating segment. The Company's chief operating decision maker ("CODM") is its chief executive officer, who reviews financial information for purposes of making operating decisions, assessing financial performance and allocating resources. The Company's CODM evaluates financial information on a consolidated basis.

Classification and Accretion of Convertible Preferred Stock

The Company's Series A, B, B-1, B-2, C, D, E, F, G, G-2, and G-3 convertible preferred stock are classified outside of stockholders' equity (deficit) because the holders of such shares have liquidation rights in the event of a deemed liquidation that, in certain situations, is not solely within the control of the Company.

Foreign Currency

Assets and liabilities of the Company's foreign subsidiaries are translated into U.S. dollars (USD) using period-end exchange rates while revenues and expenses are translated at the average exchange rate for the period presented. Gains or losses from balance sheet translation are the only component of accumulated other comprehensive loss in the consolidated balance sheet.

Recently Adopted Accounting Standards

The FASB issued ASU 2018-15, *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement that is a Service Contract*, In August 2018. ASU 2018-15 requires a customer in a cloud computing arrangement that is a service contract to follow the internal-use software guidance in ASC 350-40 to determine which implementation costs to defer and recognize as an asset. The guidance is effective for the fiscal year beginning January 1, 2021, and interim periods within annual periods beginning after December 15, 2021. Early adoption is permitted. The Company adopted the guidance as of January 1, 2021 on a prospective basis. The adoption did not have a material effect on the Company's consolidated financial statements.

In November 2018, the FASB issued ASU 2018-18, Collaborative Arrangements (Topic 808*): Clarifying the Interaction between Topic 808 and Topic 606*. This ASU provides guidance that clarifies when certain transactions between participants in a collaborative arrangement should be accounted for under ASC 606 when the counterparty is a customer, and amends ASC 808 to refer to the unit-of-account guidance in ASC 606. The guidance specifically precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer for that transaction. The Company adopted the guidance as of January 1, 2021. The adoption did not have a material effect on the Company's consolidated financial statements.

The FASB issued ASU 2016-02, *Leases*, (Topic 842) (ASU 2016-02), in February 2016. ASU 2016-02 requires lessees to recognize, at commencement date, a lease liability representing the lessee's obligation to make payments arising from the lease and a right-of-use asset representing the lessee's right to use or control the use of

a specific asset for the lease term. Under the new guidance, lessor accounting is largely unchanged. The Company adopted Topic 842 under the private company transition guidance as of January 1, 2022 using a modified retrospective approach. The Company elected a practical expedient which does not require the Company to reassess the lease classification for any expired or existing leases. Upon adoption, the Company recorded an operating lease right-of-use asset of $27.0 million and a corresponding operating lease liability of $41.8 million. The adoption resulted in a decrease to deferred rent of $14.8 million. The Company's accounting for finance leases (formerly referred to as capital leases prior to the adoption of Topic 842) remains substantially unchanged. The impact on opening retained earnings was not material.

In October 2021, the FASB issued ASU No. 2021-08, Business Combinations (Topic 805): *Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, which clarifies that an acquirer of a business should recognize and measure contract assets and contract liabilities in a business combination accordance with Topic 606 as if it had originated the contracts. The amendments should be applied prospectively to business combinations occurring on or after the effective date of the amendments, with early adoption permitted. The Company adopted the guidance as of January 1, 2022. The adoption did not have a material impact on the Company's financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes* ("ASU No. 2019-12"), which simplifies the accounting for income taxes by eliminating certain exceptions to the guidance in ASC 740 related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. It clarifies that single-member limited liability companies and similar disregarded entities that are not subject to income tax are not required to recognize an allocation of consolidated income tax expense in their separate financial statements, but they could elect to do so. The Company adopted the guidance as of January 1, 2022. The adoption did not have a material impact on the Company's financial statements.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU No. 2016-13"). ASU No. 2016-13 requires the measurement and recognition of expected credit losses for financial assets that are held at amortized cost, including trade receivables. ASU No. 2016-13 replaces the previous incurred loss impairment model with an expected loss model which requires the use of forward-looking information to calculate credit loss estimates. The Company adopted the guidance as of January 1, 2023. The adoption of the standard did not have a material impact the Company's financial statements. As part of our adoption of Topic 326, we assess our accounts receivables for expected credit losses at each reporting period by disaggregating by customers with similar characteristics, such as customer type and industry. The Company reviews for expected credit losses based on the age of an invoice, historical payment trends, as well as forward looking data and current economic trends. If a credit loss is determined, we record a reduction to our accounts receivable balance with a corresponding selling, general, and administrative expense.

3. BUSINESS COMBINATIONS

Mpirik

On March 8, 2023, the Company acquired all of the issued and outstanding interests of Mpirik, Inc. ("Mpirik"), a cardiology-focused healthcare technology company specializing in data-driven patient screening, automated care coordination, and clinical research. Mpirik's platform adds to the Company's existing portfolio to address the way heart disease is detected, diagnosed, and treated, further expanding Tempus's cardiology business. The acquisition resulted in goodwill of $10.6 million. The aggregate acquisition date fair value of consideration for the Mpirik acquisition totaled $9.7 million. Consideration was made up of $4.6 million of

non-voting common stock, $4.7 million of cash, and contingent consideration payable in cash with an acquisition date fair value of $0.4 million. In accordance with the terms of the agreement, $0.8 million in cash consideration and $0.3 million in equity consideration was held back and is payable on March 11, 2024.

Cash consideration of $4.7 million is net of a $0.3 million net working capital adjustment. In accordance with the terms of the agreement, the securityholders of the acquired business will be entitled to receive contingent consideration from the Company payable in an aggregate value of $1.0 million in cash, contingent upon the acquired business reaching a revenue target of $1.5 million for the twelve-month period ending December 31, 2023. The contingent consideration has an acquisition fair value date of $0.4 million, which the Company recognized within Other current liabilities. The contingent consideration is classified as a Level 3 measurement for which fair value is derived from inputs that are unobservable and significant to the overall fair value measurement. The contingent consideration will be remeasured at fair value in each period following the closing within selling, general and administrative expense. See Note 14 for more information. In addition, the Company issued 17,450 performance stock units to certain retained Mpirik employees on the closing date of the acquisition.

Arterys

On October 3, 2022, the Company acquired Arterys, Inc. (“Arterys”), a company that provides a platform to derive insights from radiology medical imagines to improve diagnostic decision-making, efficiency, and productivity across multiple disease areas, which resulted in goodwill of $11.1 million. The aggregate acquisition date fair value of consideration for the Arterys acquisition totaled $8.3 million, net of cash acquired of $0.3 million. Consideration was made up of $4.9 million of non-voting common stock and $3.0 million cash. Cash consideration of $3.0 million is net of a $1.0 million working capital adjustment paid back to Tempus in March 2023.

Highline

On January 4, 2022, the Company entered into a Unit Purchase Agreement with Highline Consulting, LLC (“Highline”), a California limited liability company, Highline Consulting Parent, LLC, and the unitholders of Highline (collectively, the “Sellers”), pursuant to which the Company acquired all of the issued and outstanding interests of Highline, which transaction is referred to as the “Highline Acquisition”. Highline manages and executes on early and late-stage clinical trials, applying a customized approach to each study. Highline’s capabilities and expertise will help support and grow new and established business lines within Tempus, allowing the Company to vertically integrate more clinical trial services when appropriate to complement its existing CRO partnerships. Highline revenue will be included within Data and services revenue in the Company’s consolidated financial statements.

The Company acquired Highline for a purchase price of $35.5 million. In addition, following the closing, the Sellers will be entitled to receive contingent consideration from the Company in an aggregate amount of up to $5.0 million, payable in a combination of cash and shares of the Company’s Class A common stock, contingent upon certain individual Sellers remaining employed by the Company as of the first and second anniversary of the closing. The contingent payments will be recorded pro rata over the two years following the closing within selling, general and administrative expense. In addition, the Company established a retention bonus pool of restricted stock units with an aggregate value of $4.0 million to be allocated among Highline employees retained by the Company. The retention bonus pool will be recorded as compensation expense over the requisite service period.

The Company incurred an insignificant amount of transaction costs related to the Highline Acquisition, which were recorded within Selling, general and administrative expense in the consolidated statement of operations.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The aggregate acquisition date fair value of consideration for the Highline Acquisition totaled $35.0 million, net of cash acquired of $3.6 million and estimated net working capital deficiency of $0.5 million.

The following table summarizes the allocation of the aggregate purchase price of the Highline Acquisition (in thousands):

Cash	$ 3,601
Accounts receivable	1,743
Prepaid expenses and other current assets	778
Accounts payable	(1,124)
Accrued expenses	(31)
Other current liabilities	(3,129)
Fair value of identifiable net assets acquired	1,838
Goodwill	26,062
Trade names	8,000
Customer relationships	2,750
Net intangible assets	36,812
Total Acquisition Price	$38,650

The excess of purchase consideration over the fair value of the net assets acquired was recorded as goodwill, which is primarily attributed to the assembled workforce of the acquired company and expected growth from vertical integration of Highline's clinical trial services. As the Highline Acquisition was deemed to be a purchase of assets for tax purposes, the tax basis in goodwill is equal to the book basis in goodwill, and it will be amortized over a 15 year period for tax purposes. The trade names and customer relationships intangible assets were established with seven year and three year remaining useful lives, respectively.

The following unaudited pro forma information shows the results of the Company's operations as though the acquisition had occurred as of the beginning of the comparable period, January 1, 2021, (in thousands):

	Year Ended December 31, 2021
Revenues	$ 269,211
Net income applicable to common shares	(263,134)

The pro forma results have been prepared for comparative purposes only and are not necessarily indicative of the actual results of operations had the acquisition taken place as of the beginning of the period presented, or the results that may occur in the future. The results were prepared utilizing the actual results of the business, adjusted to include $2.1 million of amortization expense and $2.5 million of selling, general and administrative expense related to the contingent payments.

For the year ended December 31, 2022, Highline contributed $19.8 million in net revenue within the Data and services revenue line and $5.0 million of net loss to the consolidated Tempus results.

AKESOgen

On December 9, 2019, in accordance with a stock purchase agreement, Tempus Labs Inc. purchased 100% of the issued and outstanding shares of capital stock of AKESOgen for $30.3 million, with an adjustment for working capital. In accordance with the terms of the agreement, $4.0 million of the consideration was held back, which was subsequently paid in July 2021. The transaction also included a contingent consideration arrangement to transfer

shares of non-voting common stock to the former owners with an acquisition date fair value of $3.4 million, which the company recognized under long-term liabilities. The consideration was to be paid out based on AKESOgen's 2020 revenue, with a maximum payout of 726,979 shares of non-voting common stock. On May 19, 2021, the Company entered into a settlement agreement with the former owners of AKESOgen related to the contingent consideration, whereby $7.5 million was paid in cash and 145,466 shares of non-voting common stock were to be paid out on the third anniversary of the Closing date. The shares of non-voting common stock were issued on December 9, 2022 and subsequently repurchased by the Company in January 2023.

4. BALANCE SHEET COMPONENTS

Property and Equipment, net

The following summarizes property and equipment, net as of December 31, 2021 and 2022 and September 30, 2023 (in thousands):

	December 31, 2021	December 31, 2022	September 30, 2023
Equipment	$ 47,750	$ 65,327	$ 89,377
Leasehold improvements	23,716	30,390	41,031
Furniture and fixtures	6,573	6,633	6,633
Total property and equipment, gross	78,039	102,350	137,041
Less: accumulated depreciation	(42,644)	(58,245)	(73,903)
Property and equipment, net	$ 35,395	$ 44,105	$ 63,138

Depreciation expense on property and equipment is classified as follows in the accompanying consolidated statements of operations for the years ended December 31, 2021 and 2022 and the nine months ended September 30, 2022 and 2023 (in thousands):

	Year Ended		Nine Months Ended	
	December 31, 2021	December 31, 2022	September 30, 2022	September 30, 2023
Cost of revenue, genomics	$ 7,504	$ 8,190	$ 5,462	$ 9,729
Selling, general and administrative costs	6,255	7,133	5,081	5,929
Research and development	—	1,371	1,371	—
Total depreciation	$ 13,759	$ 16,694	$ 11,914	$ 15,658

Accrued Expenses

Accrued expenses consist of the following (in thousands):

	December 31, 2021	December 31, 2022	September 30, 2023
Accrued compensation and employee benefits	$ 12,968	$ 22,374	$ 18,769
Accrued expenses	27,726	32,439	41,786
Interest payable	—	459	5,906
Total accrued expenses	$ 40,694	$ 55,272	$ 66,461

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Investments and Other Assets

On June 21, 2021, the Company contributed $5.9 million in cash for a minority interest in a research platform in service of advancing data-driven medicine in psychiatry. The Company concurrently entered a Commercial partnership agreement with the investee for the purpose of furthering the commercialization efforts of the associated research platform. The commercial partnership agreement includes committed payments for access to the data and additional payments contingent on the commercialization of such data. The annual license fee commitment is not materially significant.

5. GOODWILL AND INTANGIBLES

Goodwill represents the excess of the purchase price in a business combination over the fair value of net tangible and intangible assets acquired. As disclosed in Note 2, Goodwill is tested for impairment at least annually as of October 1st. The changes in the carrying amount of goodwill for the years ended December 31, 2021 and 2022 were as follows (in thousands):

Balance as of December 31, 2020	$15,992
Foreign exchange rate adjustment	(7)
Balance as of December 31, 2021	$15,985
Goodwill related to business combinations	37,113
Foreign exchange rate adjustment	2
Balance as of December 31, 2022	$53,100

During the nine months ended September 30, 2022 and 2023, goodwill of $26.0 million and $10.6 million was recorded in connection with the acquisitions of Highline and Mpirik, respectively.

There was no goodwill impairment for the years ended December 31, 2021 and 2022 or for the nine months ended September 30, 2022 and 2023.

Intangible assets are initially recorded at their acquisition cost, or fair value if acquired as part of a business combination and amortized over their estimated useful lives. Intangible assets consist of a website domain, customer relationships and trade names acquired as part of a business combination, and licensed data acquired by entering into research collaboration agreements. In each license arrangement, the other party provides the Company with specified data, which currently is used primarily for research and development purposes but may also be licensed to third parties. The asset represents the Company's right to use these datasets. The Company also recognizes a liability for the associated minimum payments that are presented within accrued data licensing fees.

During the year ended December 31, 2021, the gross amount of intangible assets increased $3.0 million, resulting from the extension of a research collaboration agreement. During the year ended December 31, 2022, the Company recorded an additional $2.1 million in licensed data related to de-identified data obtained through additional research collaboration agreements, and $8.0 million and $2.8 million of trade names and customer relationships, respectively, related to the Highline Acquisition.

In January 2023, the Company amended a data licensing agreement, which reduced the future data license payments the Company owes in exchange for waiving exclusivity rights on the licensed data. The Company remeasured the related licensed data intangible asset to fair value, which resulted in an impairment of $7.4 million recorded in Research and development during the nine months ended September 30, 2023. A $7.9 million gain resulting from the related reduction of future data license payments was also recorded in Research and development during the nine months ended September 30, 2023. The impairment resulted in a reduction of $40.1 million and $32.7 million to gross intangible assets and accumulated amortization, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The following table summarizes intangible assets as of December 31, 2021 and 2022 and September 30, 2023 (in thousands):

	December 31, 2021			December 31, 2022			September 30, 2023		
	Gross Amount	Accumulated Amortization	Net	Gross Amount	Accumulated Amortization	Net	Gross Amount	Accumulated Amortization	Net
Customer relationships	$17,300	$ 4,943	$12,357	$20,550	$ 8,581	$11,969	$20,550	$ 11,372	$ 9,178
Licensed data	53,535	28,625	24,910	55,612	37,179	18,433	19,321	9,683	9,638
Website domain	19	—	19	19	—	19	19	—	19
Trade names	—	—	—	8,000	1,143	6,857	8,000	2,000	6,000
	$70,854	$ 33,568	$37,286	$84,181	$ 46,903	$37,278	$47,890	$ 23,055	$24,835

Amortization of intangible assets is recognized using the straight-line method over their estimated useful lives, which range from three to seven years. Amortization expense was $10.1 million and $13.3 million for the years ended December 31, 2021 and December 31, 2022, respectively, and $9.9 million and $8.9 million for the nine months ended September 30, 2022 and 2023, respectively, and is recorded in cost of revenues, technology research and development or research and development, depending on use of the asset. The weighted average life of our intangibles is approximately six years.

As of December 31, 2022, the estimated future amortization expense related to intangible assets is as follows (in thousands):

2023	$ 13,724
2024	12,546
2025	4,352
2026	4,204
2027	1,290
Thereafter	1,143
Total	$ 37,259

6. COMMITMENTS AND CONTINGENCIES

Purchase Obligations

The Company has entered into non-cancelable arrangements with third parties, primarily related to data licenses and cloud computing services. Where applicable, the Company calculates its obligation based on termination fees that can be paid to exit the contract. The data license agreements include committed payments for access to the data and additional payments contingent on the commercialization of such data. For the years ended December 31, 2021 and 2022, the Company recognized data licensing and cloud computing expenses of $39.3 million and $31.1 million, respectively, related to non-cancelable arrangements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

As of December 31, 2022, future payments under these contractual obligations were as follows (in thousands):

2023	$ 30,480
2024	30,230
2025	28,730
2026	12,480
2027	3,829
Thereafter	—
Total purchase obligations	105,749
Less: Amount representing interest	400
Present value of net minimum purchase obligations	105,349
Less: Current portion of purchase obligations	30,197
Total long-term purchase obligations	$ 75,152

As of September 30, 2023, future payments under these contractual obligations were as follows (in thousands):

2023	$ 9,058
2024	37,580
2025	38,580
2026	26,008
2027	3,829
Thereafter	—
Total purchase obligations	$ 115,055
Less: Amount representing interest	116
Present value of net minimum purchase obligations	$ 114,939
Less: Current portion of purchase obligations	35,489
Total long-term purchase obligations	$ 79,450

Legal Matters

From time to time in the normal course of business, the Company may be subject to various legal matters such as threatened or pending claims or proceedings. The Company had no outstanding litigation as of December 31, 2022 or as of September 30, 2023.

7. LEASES

The Company has entered into various non-cancelable operating lease agreements, primarily for the rent of office and lab space, with expirations at various dates through 2029. The Company has also acquired portions of its equipment under finance lease arrangements, formerly referred to as capital leases under ASC 840, with expirations between 2022 and 2023. Lease cost is recognized on a straight-line basis over the lease term. Variable lease costs, which include items such as real estate taxes, common area maintenance, utilities, and storage are not included in the calculation of the right-of-use assets and are recognized as incurred.

The components of total lease costs for the year ended December 31, 2022 are as follows:

Operating lease cost	$ 6,426
Variable lease cost	4,732
Short-term lease costs	139
Sublease income	(191)
Finance lease cost	
Amortization of right-of-use assets	381
Interest on lease liabilities	21
Total lease costs	**$ 11,508**

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Lease term and discount rate as of December 31, 2022 are as follows:

Weighted-average remaining lease term (in years)	
Operating leases	6.6
Finance leases	0.7
Weighted-average discount rate	
Operating leases	6.7%
Finance leases	4.2%

As of December 31, 2022, the future payments under operating and finance leases for each of the next five years and thereafter are as follows (in thousands):

	Finance Leases	Operating Leases
2023	$ 294	$ 8,760
2024	—	8,702
2025	—	8,083
2026	—	6,657
2027	—	6,751
Thereafter	—	15,324
Total minimum lease payments	294	54,277
Less: Amount representing interest	6	11,082
Present value of net minimum lease payments	288	43,195
Less: Current portion of lease liabilities	288	6,070
Total long-term lease liabilities	$ —	$ 37,125

As of September 30, 2023, there were no material changes to the Company's total lease costs, lease term and discount rate, or lease obligations.

The Company elected the modified retrospective approach and is required to present previously disclosed information under the prior accounting standards for leases. Rent expense recorded under ASC 840 for the year ended December 31, 2021 was $9.3 million. As of December 31, 2021, the future payments under operating and capital leases for each of the next five years and thereafter are as follows (in thousands):

	Capital Leases	Operating Leases
2022	$ 454	$ 8,444
2023	311	8,632
2024	—	8,621
2025	—	7,954
2026	—	6,479
Thereafter	—	20,183
Total minimum lease payments	765	60,313
Less: Amount representing interest	55	
Present value of net minimum capital lease payments	710	
Less: Current portion of capital lease liabilities	419	
Total long-term capital lease liabilities	$ 291	

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

8. STOCKHOLDERS' EQUITY

Common Stock

The Company has authorized two classes of common stock, voting and non-voting. In March 2021, the Company amended its certificate of incorporation to bifurcate the voting common stock into two classes, Class A common stock and Class B common stock. As of December 31, 2021, the Company has authorized 181,700,285 shares of Class A common stock, 5,374,899 shares of Class B common stock, and 63,946,627 shares of non-voting common stock. In January 2022, the Company increased the number of authorized shares of non-voting common stock to 66,946,627. In April 2022, the Company increased the number of authorized shares of Class A common stock to 195,865,548 in conjunction with the Series G-3 Preferred stock financing (see Note 9, Redeemable Convertible Preferred Stock).

Class A common stock, Class B common stock and non-voting common stock are collectively referred to as "Common Stock" throughout the notes to these consolidated financial statements unless otherwise noted.

The rights of the holders of Class A common stock, Class B common stock and non-voting common stock are identical, except with respect to voting. Each share of Class A common stock is entitled to one vote per share and each share of Class B common stock is entitled to fifteen votes per share. Non-voting shares of common stock do not have voting rights.

Each share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock. Upon the closing of the IPO, on any transfer of shares of Class B common stock, whether or not for value, each such transferred share will automatically convert into one share of Class A common stock, except for certain transfers detailed below and further described in the Company's amended and restated certificate of incorporation that will be in effect on the closing of this offering.

Any holder's shares of Class B common stock will convert automatically into Class A common stock, on a one-to-one basis, upon certain circumstances, including: (1) the sale or transfer of such shares of Class B common stock, other than to a "controlled entity," which is any person or entity which, directly or indirectly, is controlled by, or is under common control with, the holder of such shares of Class B common stock; (2) the twenty-year anniversary of the filing of the certificate of amendment to the Company's ninth amended and restated certificate of incorporation, which is March 15, 2041; (3) the termination of Mr. Lefkofsky's employment or service with the Company as an executive officer and member of the board of directors; and (4) the date that Mr. Lefkofsky and his controlled entities hold, in the aggregate, fewer than 10,000,000 shares of the Company's capital stock (as adjusted for stock splits, stock dividends, combinations, subdivisions and recapitalizations).

Once transferred and converted into Class A common stock, the Class B common stock may not be reissued.

Shares of non-voting common stock automatically convert into shares of Class A common stock immediately upon the closing of an initial public offering ("IPO").

The Company issues stock-based awards to its employees in the form of stock options, restricted stock units, performance stock units and restricted stock, all of which have the potential to increase the outstanding shares of common stock in the future (see Note 10, Stock-Based Compensation).

Upon any liquidation, dissolution or winding up of the Company, the remaining assets of the Company would first be distributed to the holders of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, followed by distributions to the holders of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, and Series A Preferred Stock. After distribution to the

preferred stockholders, the remaining assets of the Company would be distributed to the holders of shares of Series C Preferred Stock and Common Stock, pro rata based on the number of shares then held by each holder, treating all Series C Preferred Stock as if they had been converted into Common Stock.

Common Stock Warrant

In connection with a 2021 strategic collaboration with AstraZeneca, the Company granted warrants to purchase $100 million in shares of the Company's Class A common stock at an exercise price equal to the price per share at which the Company's common stock is valued in connection with the consummation of an IPO or a de-SPAC transaction, if an IPO or de-SPAC is completed on or before December 31, 2022. As no such transaction has occurred, in accordance with the agreement, the exercise price will be the latest equity financing price. The warrant will be automatically cancelled and terminated for no consideration in the event AstraZeneca declines to extend its financial commitment before December 31, 2024. If AstraZeneca exercises the warrant, AstraZeneca will be required to increase its minimum commitment under the MSA from $200 million to $300 million through December 2026.

Treasury Stock

In January 2023, the Company repurchased 145,466 shares of non-voting common stock previously issued to the former owners of AKESOgen. These shares were accounted for as treasury stock. The Company records treasury stock at cost.

9. REDEEMABLE CONVERTIBLE PREFERRED STOCK

In November 2020, the Company authorized 7,135,072 shares and issued 3,296,093 shares of Series G-2 Preferred stock ("Series G-2 Preferred"). In January 2021, the Company issued 287,922 shares of Series G-2 Preferred Stock for aggregate proceeds of $16.5 million. In conjunction with this issuance, the Company redeemed 130,876 shares of Series G-2 Preferred Stock from a related party in exchange for $7.5 million. Each share has a par value of $0.0001. The Company used the proceeds from such issuances for working capital and general corporate purposes.

In April 2022, the Company issued 1,614,114 shares of Series G-3 Preferred stock ("Series G-3 Preferred") for aggregate proceeds of $92.5 million. Each share has a par value of $0.0001. The Company will use the proceeds for working capital and general corporate purposes.

In January 2023, the Company issued 47,781 shares of Series G-3 convertible preferred stock as payment of paid-in-kind dividends.

In October 2023, the Company issued 785,245 shares of Series G-4 convertible preferred stock ("Series G-4 Preferred") for aggregate proceeds of $45.0 million. Each share has a par value of $0.0001. The Company will use the proceeds for working capital and general corporate purposes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Redeemable convertible preferred stock outstanding as of December 31, 2021 and 2022 and September 30, 2023, consisted of the following (in thousands, except share amounts):

Series Preferred	Year Issued	As of December 31, 2021			
		Shares		Liquidation Amount	Carrying Value
		Authorized	Outstanding		
Series A	2015	10,000,000	10,000,000	$ 10,500	$ 10,000
Series B	2016	5,374,899	5,374,899	10,500	10,000
Series B-1	2016	2,500,000	2,500,000	10,500	10,000
Series B-2	2017	4,191,173	4,191,173	31,500	30,000
Series C	2017	9,779,403	9,779,403	80,865	70,000
Series D	2018	8,534,330	8,534,330	95,855	94,873
Series E	2018	6,630,905	6,630,905	134,939	134,939
Series F	2019	8,077,674	8,077,674	232,934	232,934
Series G	2020	2,537,290	2,537,290	107,656	107,656
Series G-2*	2020/2021	7,135,072	3,453,139	197,889	197,889
Total convertible preferred stock		64,760,746	61,078,813	$ 913,138	$ 898,291

* Excludes amounts related to the conversion of convertible note

Series Preferred	Year Issued	As of December 31, 2022			
		Shares		Liquidation Amount	Carrying Value
		Authorized	Outstanding		
Series A	2015	10,000,000	10,000,000	$ 10,500	$ 10,000
Series B	2016	5,374,899	5,374,899	10,500	10,000
Series B-1	2016	2,500,000	2,500,000	10,500	10,000
Series B-2	2017	4,191,173	4,191,173	31,500	30,000
Series C	2017	9,779,403	9,779,403	83,746	70,000
Series D	2018	8,534,330	8,534,330	100,347	99,479
Series E	2018	6,630,905	6,630,905	143,036	143,036
Series F	2019	8,077,674	8,077,674	246,911	246,911
Series G	2020	2,537,290	2,537,290	113,554	113,554
Series G-2*	2020/2021	3,453,139	3,453,139	197,889	197,889
Series G-3**	2022	4,362,476	1,614,114	95,274	95,274
Total convertible preferred stock		65,441,289	62,692,927	$ 1,043,757	$ 1,026,143

* Excludes amounts related to the conversion of convertible note
** Excludes amounts related to embedded conversion features

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Series Preferred	Year Issued	As of September 30, 2022 Shares Authorized	Shares Outstanding	Liquidation Amount	Carrying Value
Series A	2015	10,000,000	10,000,000	$ 10,374	$ 10,000
Series B	2016	5,374,899	5,374,899	10,374	10,000
Series B-1	2016	2,500,000	2,500,000	10,374	10,000
Series B-2	2017	4,191,173	4,191,173	31,122	30,000
Series C	2017	9,779,403	9,779,403	82,620	70,000
Series D	2018	8,534,330	8,534,330	98,963	98,335
Series E	2018	6,630,905	6,630,905	140,995	140,995
Series F	2019	8,077,674	8,077,674	243,388	243,388
Series G	2020	2,537,290	2,537,290	112,038	112,038
Series G-2*	2020/2021	3,453,139	3,453,139	197,889	197,889
Series G-3**	2022	4,362,476	1,614,114	94,342	94,342
Total convertible preferred stock		65,441,289	62,692,927	$ 1,032,479	$ 1,016,987

* Excludes amounts related to the conversion of convertible note
** Excludes amounts related to embedded conversion features

Series Preferred	Year Issued	As of September 30, 2023 Shares Authorized	Shares Outstanding	Liquidation Amount	Carrying Value
Series A	2015	10,000,000	10,000,000	$ 10,374	$ 10,000
Series B	2016	5,374,899	5,374,899	10,374	10,000
Series B-1	2016	2,500,000	2,500,000	10,374	10,000
Series B-2	2017	4,191,173	4,191,173	31,122	30,000
Series C	2017	9,779,403	9,779,403	85,572	70,000
Series D	2018	8,534,330	8,534,330	103,629	102,908
Series E	2018	6,630,905	6,630,905	149,409	149,409
Series F	2019	8,077,674	8,077,674	257,907	257,907
Series G	2020	2,537,290	2,537,290	118,286	118,286
Series G-2*	2020/2021	3,453,139	3,453,139	197,889	197,889
Series G-3**	2022/2023	4,362,476	1,661,895	97,931	95,238
Total convertible preferred stock		65,441,289	62,740,708	$ 1,072,867	$ 1,051,637

* Excludes amounts related to the conversion of convertible note
** Excludes amounts related to embedded conversion features

Stock issuance costs that reduced the initial value of preferred stock were fully accreted in the period of the Series issuance. As of December 31, 2021 and 2022 and September 30, 2023, all cumulative dividends have been paid and/or accrued.

The Series A Preferred, Series B Preferred, Series B-1 Preferred, Series B-2 Preferred, Series C Preferred, Series D Preferred, Series E Preferred, Series F Preferred, Series G Preferred, Series G-2 Preferred, Series G-3 Preferred, and Series G-4 Preferred, collectively, are referenced below as the “Series Preferred.” The rights, preferences, privileges, restrictions and other matters relating to the Series Preferred are as follows:

Dividends

Except for the holders of Series G-2 Preferred, Series G-3 Preferred and Series G-4 Preferred, the holders of Series Preferred are entitled to dividends at a rate of 5% or 6% of the original issue price (subject to adjustment

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series), depending on the series each holder participated in and/or the holders' election to receive cash dividends annually or to accrue. The holders of Series G-3 Preferred are entitled to dividends at a rate of 4% of the original issue price, paid in non-assessable shares of Series G-3 Preferred Stock ("Series G-3 PIK Dividends"). The holders of Series G-4 Preferred are entitled to dividends at a rate of 5.25% of the original issue price, paid in non-assessable shares of Series G-4 Preferred Stock ("Series G-4 PIK Dividends").

The dividends are cumulative and accrued from the date of issue while the shares are redeemable at the option of the holders. Any cash payments are subject to approval by the Board.

Voting Rights

With the exception of the Series B Preferred stockholders, Preferred stockholders are entitled to the number of votes equal to the product obtained by multiplying the number of shares of voting common stock into which their shares could be converted.

Series B Preferred stockholders are entitled to a number of votes equal to the product obtained by multiplying the number of shares of Class B common stock into which their shares could be converted by fifteen.

Liquidation Preference

Holders of Series Preferred are entitled to receive, upon a liquidation event, the amount that would have been received if all shares of Series Preferred had been converted into voting common stock immediately prior to such liquidation event. If, upon the liquidation event, the assets of the Company are insufficient to fully pay the amounts owed to Series Preferred stockholders, the holders of Series Preferred will have preferential payment over other preferred holders in the following order: Series G-4, Series G-3, Series G-2, Series G, Series F, Series E, Series D, Series C, Series B-2, Series B-1, Series B, Series A.

Redemption

Each outstanding share of Series G-4 Preferred, Series G-3 Preferred, Series G-2 Preferred, Series G Preferred, Series F Preferred, Series E Preferred, and Series D Preferred shall be redeemed by the Company at a price equal to the original issuance price per share, plus any accruing dividends accrued but unpaid thereon whether or not declared, together with any other dividends declared but unpaid, in one cash payment not more than sixty days after the receipt by the Company, at any time during the period commencing on the date that is seven years from the original issue date of the Series G-4 Preferred shares and ending sixty days thereafter, of written notice from the holders of each preferred series, voting as separate class, requesting redemption of all shares of the preferred series. Upon receipt of a redemption request, the Company shall apply all of its assets to such redemption, and to no other corporate purpose, except to the extent prohibited by Delaware law governing distributions to stockholders.

Conversion

Each share of Series Preferred shall be convertible, at the option of the holder, at any time, into such number of fully paid and non-assessable shares of voting common stock. Each share of Series Preferred shall automatically be converted into shares of voting common stock upon either (i) the closing of a public offering resulting in at least $100,000,000 of gross proceeds to the company or (ii) the date and time, of the occurrence of an event, specified by vote or written consent of the holders of the outstanding shares of each individual series of preferred shares. There were no shares of voting common stock issued as a result of conversion for the periods ended December 31, 2021 and December 31, 2022. In the event of an initial public offering ("IPO"), the

conversion price of each of the Series G-3 Preferred and the Series G-4 Preferred is subject to a discount equal to the greater of (i) 15% discount off of the public offering price and (ii) 10% discount off of the original issue price of the Series G-3 Preferred and Series G-4 Preferred ("Special IPO Adjustment"). In addition, holders of Series G-4 Preferred will receive an amount equal to 5% of the per share original issue price for each share of Series G-4 Preferred (the "G-4 Special Payment"), in the event that following an IPO, the average of the last trading price on each trading day during the ten day trading period beginning on the first day of trading of the Company's Class A common stock is less than 110% of the price per share of Class A common stock sold in the IPO.

In conjunction with the issuance of the Series G-3 Preferred, the Company signed a separate agreement with one of the investors ("Investor Letter Agreement") in which the Company will, in connection with an IPO, pay the investor an amount equal to (a) the product of 287,923 and a 15% discount off of the public offering price, less (b) the product of 287,923 and the price per share of Class A Common Stock sold in the IPO. The agreement was signed with only one investor as an incentive to invest in Series G-3 Preferred.

The Company evaluated the conversion features to assess whether they qualify as freestanding instruments which are required to be bifurcated from the host instrument. Each instrument was determined to be an embedded conversion option which is clearly and closely related to its equity host instrument, and as such, no bifurcation was required.

10. STOCK-BASED COMPENSATION

Stock Plan

In 2015, the Company adopted the Tempus Labs, Inc. 2015 Stock Plan (the Plan), which has been amended and restated numerous times to increase the aggregate shares authorized to be issued to employees, consultants, and directors of the Company. As of December 31, 2021, there were 22,115,750 shares authorized under the Plan. In February 2022, the Plan was amended to increase the aggregate shares authorized to be issued, and as of December 31, 2022, there were 25,115,750 authorized under the Plan. In April 2023, the Plan was amended to increase the aggregate shares authorized to 28,115,750.

The Plan provides for awards in the form of stock options, restricted stock awards, restricted stock unit awards, and performance stock units. The maximum contractual term of awards issued under the Plan is seven years. The Plan is administered by the Board of Directors of the Company, who determine the number of awards to be issued. As of December 31, 2021 and 2022, 971,331 shares and 2,476,611 shares, respectively, were available for future issuance under the Plan.

The Company recognized stock-based compensation expense of $0.6 million in the year ended December 31, 2021 within Selling, general, and administrative expense. No stock-based compensation expense was recorded in the year ended December 31, 2022 or in the nine months ended September 30, 2022 and 2023. The Company accounts for forfeitures as they occur.

On January 18, 2023, the Company approved a two-year extension of the expiration date for active employees whose RSUs expire either in 2023 or 2024. The Company accounted for the extension as a stock compensation modification, which resulted in an increase in unrecognized compensation cost of $35.3 million.

On July 18, 2023 the Company approved the removal of the market condition for 5,898,596 outstanding PSUs. The Company accounted for this as a stock compensation modification. Subsequent to the modification, these units are treated as RSUs as the terms are consistent with the Company's existing RSUs. The modification resulted in a decrease in total unrecognized compensation cost of $19.3 million.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Restricted Stock Units

The restricted stock units ("RSUs") granted under the Plan are subject to two vesting conditions. The first is a time-based component. The majority of the awards are eligible to vest over a four-year period, with 20% of the awards being eligible to vest after one year and the remaining awards becoming eligible to vest on a quarterly basis thereafter. The second vesting condition is the occurrence of a liquidity event, as defined in the grant agreement. The fair value of each RSU is estimated on the date of grant using the 409a value of a non-voting share of common stock on such date. The table below summarizes restricted stock unit activity under the Plan for the year ended December 31, 2022 and the nine months ended September 30, 2023:

	Restricked Stock Units	Weighted-Average Grant Date Fair Value
Unvested at December 31, 2021	10,344,419	$ 11.11
Granted	2,808,742	$ 38.54
Forfeited	(741,740)	$ 27.51
Unvested at December 31, 2022	12,411,421	$ 16.15
Granted	2,802,075	$ 33.87
Forfeited	(380,397)	$ 32.87
Expired	(12,000)	$ 0.28
PSU Modification	5,898,596	$ 37.82
Unvested at September 30, 2023	20,719,695	$ 26.30

During the years ended December 31, 2021 and 2022, the Company granted 2,255,425 and 2,808,742 Restricted Stock Units ("RSUs"), respectively. There were no restricted stock units that vested during the years ended December 31, 2021 and 2022. As of December 31, 2021 and 2022, there was $115.6 million and $200.4 million of unrecognized stock compensation expense relating to RSUs, respectively. Because of the liquidity event requirement, the Company cannot estimate the weighted-average period over which this expense will be recognized.

As of September 30, 2023, there was $544.9 million of unrecognized stock compensation expense related to RSUs.

Performance Stock Units

The performance stock units ("PSUs") granted under the Plan are subject to two vesting conditions. The first condition is the achievement of a valuation target. The second vesting condition is the occurrence of a liquidity event, as defined in the grant agreement. The fair value of each PSU is estimated on the date of grant using the 409a value of a non-voting share of common stock on such date. The table below summarizes performance stock unit activity under the Plan for the year ended December 31, 2022 and the nine months ended September 30, 2023:

	Performance Stock Units	Weighted-Average Grant Date Fair Value
Unvested at December 31, 2021	5,995,000	$ 40.97
Granted	—	$ —
Forfeited	(96,404)	$ 33.48
Unvested at December 31, 2022	5,898,596	$ 41.09
Granted	17,450	$ 32.89
Forfeited	—	$ —
PSU Modification	(5,898,596)	$ 41.09
Unvested at September 30, 2023	17,450	$ 32.89

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

During the years ended December 31, 2021, the Company granted 6,000,000 PSUs. During the year ended December 31, 2022, the Company granted no PSUs. As of December 31, 2021 and December 31, 2022, there was $244.0 and $242.4 million of unrecognized compensation expense related to Performance Stock Units, respectively. Because of the liquidity event requirement, the Company cannot estimate the weighted-average period over which this expense will be recognized should the performance condition be met.

As of September 30, 2023, there was $0.6 million of unrecognized stock compensation expense related to PSUs.

Stock Options

Options granted pursuant to the Plan vest on varying schedules, based upon individual agreements. The fair value of each option granted is estimated on the date of grant using the Black-Scholes option-pricing model. The estimated life for the stock options was based on the term of the agreement. The risk-free interest rate is based on the rate for a U.S. government security with the same estimated life at the time of the option grant and the stock purchase rights.

	Number of Options	Exercise Price Ranges	Weighted-Average Exercise Price
Outstanding at December 31, 2021	210,000	$ 0.85	$ 0.85
Granted	—	$ —	$ —
Exercised	—	$ —	$ —
Forfeited	—	$ —	$ —
Outstanding at December 31, 2022	210,000	$ 0.85	$ 0.85
Options exercisable at December 31, 2022	210,000	$ 0.85	$ 0.85

The outstanding stock options were fully expensed prior to 2020. As such, no stock compensation expense relating to stock options was recorded in the year ended December 31, 2021 and 2022, and there is no unrecognized expense relating to stock options.

Restricted Stock Awards

The Company has previously granted restricted stock awards to employees. Compensation expense on those awards was recognized on a straight-line basis over the requisite service periods of the awards, typically three to four years.

	Restricted	Unrestricted	Total	Weighted-Average Grant Date Fair Value
Balance at December 31, 2021	—	4,250,000	4,250,000	$ 0.42
Vesting of restricted stock into unrestricted	—	—	—	$ 0.42
Balance at December 31, 2022	—	4,250,000	4,250,000	$ 0.42

No compensation cost was recognized for the years ended December 31, 2021 and 2022, respectively, and as of December 31, 2021 and 2022, there was no unrecognized compensation cost related to non-vested restricted stock awards, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

11. DEBT

Term Loan Facility

On September 22, 2022, the Company entered into a Credit Agreement with Ares Capital Corporation ("Ares") for a senior secured loan (the "Term Loan Facility") in the amount of $175 million, less original issue discount of $4.4 million and deferred financing fees of $2.6 million. On April 25, 2023, the Company entered into an amendment to the Credit Agreement, which was accounted for as a debt modification. The amendment to the Credit Agreement increased the Term Loan Facility by an aggregate principal amount of $50 million, less original issue discount of $1.3 million and increased the interest rate on the Term Loan Facility by 25 basis points. The proceeds of the Term Loan Facility will be used for working capital and general corporate purposes, to finance growth initiatives, to pay for operating expenses, and to pay the Transaction Costs. The Term Loan Facility is due at maturity on September 22, 2027 and is subject to quarterly interest payments for Base Rate Loans and at the end of the applicable interest rate period for Secured Overnight Financing Rate ("SOFR") Loans. As of December 31, 2022, the interest rate on the Term Loan Facility was 10.5%. As of September 30, 2023, the interest rate on the $175 million originally borrowed under the Term Loan Facility was 10.25% and 10.39% on the $50 million borrowed under the amended Credit Agreement. After the first three months from the effective date, each quarter, the Company has the option to convert the borrowing type to either a Base Rate Borrowing, which bears interest based on a Base Rate, defined as the greatest of the (a) the "Prime Rate" appearing the "Money Rates" section of the Wall Street Journal or another national publication selected by the Agent, (b) the Federal Funds Rate plus 0.50%, (c) Term SOFR for a one-month tenor in effect on such day plus 1.00% in each instance as of such day and (d) 2.00%, or a SOFR Borrowing, which bears interest based on Term SOFR. Additionally, the Company may make either a PIK election or a Cash election. Based on these elections, the Term Loan Facility will bear interest at one of the following rates:

(i) the sum of the Base Rate plus an Applicable Rate of 4% per annum plus 3.25% per annum paid in-kind by adding the accrued interest to the outstanding principal balance on each interest payment date

(ii) the Base Rate plus an Applicable Rate of 6.25% per annum

(iii) the sum of the Term SOFR for the interest period plus an Applicable rate of 5% per annum plus 3.25% per annum paid in-kind by adding the accrued interest to the outstanding principal balance on each interest payment date

(iv) the Term SOFR for the interest period in effect plus the Applicable Rate of 7.25% per annum

In addition, the Term Credit Facility contains customary representations and warranties, financial and other covenants, and events of default, including but not limited to, limitations on earnout, milestone, or deferred purchase obligations, dividends on preferred stock and stock repurchases, cash investments, and acquisitions. The Company is required to maintain a minimum liquidity of at least $25 million and maintain specified amounts of consolidated revenues for the trailing twelve-month period ending on the last day of each fiscal quarter. Minimum consolidated revenues increase each quarter. For the years ended December 31, 2023 and 2024, the Company is required to generate consolidated revenues of $342.7 million and $459.1 million, respectively. The Company was in compliance with all covenants of the Credit Agreement as of December 31, 2022 and September 30, 2023.

All obligations under the Term Loan Facility are guaranteed by the Company and secured by substantially all of the assets of the Company.

The original issue discount of $5.6 million and deferred financing fees of $2.6 million are amortized over the term of the underlying debt and unamortized amounts have been offset against long-term debt in the consolidated balance sheets. As of December 31, 2022 and September 30, 2023, the unamortized original issue discount was $4.2 million and $4.6 million, respectively, and the unamortized deferred financing fees were

$2.4 million and $2.0 million, respectively. Amortization of the original issue discount and deferred financing fees are reflected in interest expense on the consolidated statements of operations. Amortization of the original issue discount and deferred financing fees totaled $0.2 million and $0.2 million, respectively, for the year ended December 31, 2022. Amortization of the original discount and deferred financing fees totaled $0.8 million and $0.4 million, respectively, for the nine months ended September 30, 2023.

Through September 30, 2023, the Company has not made any principal repayments on the Term Loan Facility. During the year ended December 31, 2022 and the nine months ended September 30, 2023, the Company made $4.6 million and $12.3 million in interest payments, respectively. As of December 31, 2022, the interest rate on the Term Loan Facility is 10.5%. As of September 30, 2023, the interest rate on the $175 million originally borrowed under the Term Loan Facility is 10.25% and 10.39% on the $50 million borrowed under the amended Credit Agreement. The Company recognized interest expense of $5.1 million and $19.9 million related to the Term Loan Facility during the year ended December 31, 2022 and the nine months ended September 30, 2023, respectively.

Convertible Promissory Note

On June 22, 2020, in connection with entry into an agreement for use of Google LLC's, or Google's, Google Cloud Platform, the Company issued Google a convertible promissory note, or the Note, in the original principal amount of $330.0 million. On November 19, 2020, in connection with Series G-2 convertible preferred stock financing, the Company issued Google $80 million of the Series G-2 preferred stock, at a 10% discount to the purchase price per share in such financing, in partial satisfaction of the outstanding principal amount under the Note, and the Company amended and restated the terms of the Note.

The amended and restated Note, or the Amended Note, has a principal amount of $250.0 million, and bears interest at the rate set forth therein. The principal amount is automatically reduced each year based on a formula taking into account the aggregate value of the Google Cloud Platform services used by the Company. The Company accounts for the principal reductions as an offset to its cloud and compute spend within selling, general and administrative in its Consolidated Statements of Operations and Comprehensive Loss. The outstanding principal and accrued interest under the Amended Note, or the Outstanding Amount, is due and payable on the earlier of (1) March 22, 2026, which is the maturity date of the Amended Note, (2) upon the occurrence and during the continuance of an event of default, and (3) upon the occurrence of an acceleration event, which includes any termination by the Company of its Google Cloud Platform agreement. The Company generally may not prepay the Outstanding Amount, except that the Company may, at its option, prepay the Outstanding Amount in an amount such that the principal amount remaining outstanding after such repayment is $150.0 million.

If the Amended Note is outstanding at the maturity date, Google may, at its option, convert the then outstanding principal amount and interest accrued under the Amended Note into a number of shares of our Class A common stock equal to the quotient obtained by dividing (1) the Outstanding Amount on the maturity date, by (2) the average of the last trading price on each trading day during the twenty day period ending immediately prior to the maturity date.

The Company concluded that one of the conversion features meets the definition of an embedded derivative that is required to be accounted for as a separate unit of accounting. The fair value of the embedded derivative is not material and was therefore not bifurcated. As such, upon issuance of the Note the Company recorded a promissory note of $330.0 million. The Company recognized interest expense of $15.2 million and $16.4 million during the year ended December 31, 2021 and 2022, respectively, and $12.7 million and $11.7 million during the nine months ended September 30, 2022 and 2023, respectively.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

12. NET LOSS PER SHARE ATTRIBUTABLE TO COMMON STOCKHOLDERS

Basic net loss per share is calculated by dividing the net loss by the weighted average number of outstanding shares of Common Stock each period. Diluted net loss per share is calculated by giving effect to all potential dilutive Common Stock equivalents, which includes stock options, RSUs, RSAs, PSUs, and preferred stock. Because the Company incurred net losses each period, the basic and diluted calculations are the same. As a result of the adoption of ASU 2020-06 during Q1 2022, the Company used the if-converted method to calculate diluted EPS. As the Company had net losses in the year ended December 31, 2021 and 2022, and the nine months ended September 30, 2022 and 2023, respectively, all potentially dilutive common stock equivalents have been excluded from the calculation of diluted net loss per share attributable to common stockholders as their effect is anti-dilutive.

The following table presents the calculation for basic and diluted net loss per share (in thousands, except share and per share data):

	Year Ended December 31,		Nine Months Ended September 30,	
	2021	2022	2022	2023
Numerator:				
Net loss	(259,192)	(289,811)	(223,526)	(163,635)
Accretion of convertible preferred stock to redemption value	(106)	(301)	(301)	—
Dividends on Series A, B, B-1, B-2, C, D, E, F, G and G-3 preferred shares	(35,758)	(40,975)	(30,415)	(32,709)
Cumulative Undeclared Dividends on Series C preferred shares	(2,680)	(2,841)	(2,125)	(2,230)
Net loss attributable to common stockholders	(297,736)	(333,928)	(256,367)	(198,574)
Denominator:				
Weighted-average common shared outstanding, basic and diluted	62,975	63,032	62,980	63,267
Net loss per share attributable to common stockholders, basic and diluted	$ (4.73)	$ (5.30)	$ (4.07)	$ (3.14)

The following outstanding shares of common stock equivalents were excluded from the calculation of diluted net loss per share for each period, as the impact of including them would have been anti-dilutive. As disclosed in Note 8, the Company issued a warrant for $100 million in shares of the Company's Class A common stock. As per the terms of the warrant, potentially dilutive shares are based on the latest equity financing price.

	As of December 30,		As of September 30,	
	2021	2022	2022	2023
Shares associated with contingent consideration	145,466	—	145,466	—
Stock options outstanding	210,000	210,000	210,000	210,000
Convertible preferred stock	61,078,813	62,692,927	62,692,927	62,740,708
Warrant	1,744,991	1,744,991	1,744,991	1,744,991
Mpirik holdback liability	—	—	—	8,724
Total potentially dilutive shares	63,179,270	64,647,918	64,793,384	64,704,423

As disclosed in Note 10, the Company's RSUs include a triggering liquidation performance condition prior to vesting. As disclosed in Note 11, contingent upon certain financing events, the Company's Convertible

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Promissory Note will be converted to shares at the holder's option, based on the amount outstanding at the maturity date, which is subject to reduction based on services used by us prior to the maturity date. As such, these are treated as contingently issuable shares and will be excluded from potential dilutive impact until the triggering liquidation performance condition is satisfied.

As disclosed in Note 9, the Company's Series G-3 Preferred contains two embedded conversion features which will result in additional shares of Class A Common Stock to be distributed upon completion of an IPO. The number of shares which will be paid out related to these features is dependent upon the IPO price. As such, these are treated as contingently issuable shares and will be excluded from potential dilutive impact until the successful completion of an IPO.

13. INCOME TAXES

Deferred income taxes consist of the following as of December 31, 2021 and 2022 (in thousands):

	December 31,	
	2021	2022
Deferred Income Tax Assets:		
Net Operating Loss Carryforwards	$ 163,656	$ 196,643
Deferred Rent	4,038	—
IRC §163(j) Interest Expense Limitation Carryover	6,451	10,784
Lease Liability	—	11,179
Research and Development	—	37,590
Excess of Tax Basis over Book Basis Fixed Assets	—	434
Other	624	3,857
	$ 174,769	$ 260,487
Less Valuation Allowance	(161,749)	(244,064)
	$ 13,020	$ 16,423
Deferred Income Tax Liabilities		
Excess of Tax Basis over Book Basis Fixed Assets	(356)	—
Right of Use Asset	—	(6,129)
Contract Asset	(9,831)	(8,169)
Excess of Book Basis over Tax Basis Intangibles	(2,833)	(2,125)
	$ (13,020)	$ (16,423)
Net Deferred Income Tax Asset (Liability)	$ —	$ —

The provision for income taxes consists of the following as of December 31, 2021 and 2022 (in thousands):

	December 31,	
	2021	2022
Current tax expense (benefit)		
Federal	—	—
State	—	66
Total	$ —	$ 66
Deferred tax expense (benefit)		
Federal	(44,698)	(59,141)
State	(14,071)	(7,686)
Total	(58,769)	(66,827)
Change in valuation allowance	58,769	66,827
Total income tax expense (benefit)	$ —	$ 66

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The components of income before income taxes as follows (in thousands):

	December 31,	
	2021	2022
Domestic	$ (258,770)	$ (289,556)
Foreign	(422)	398

A reconciliation of the difference between the federal statutory rate and the effective income tax rate as a percentage of income before taxes for the years ended December 31, 2021 and 2022:

	December 31,	
	2021	2022
Federal Statutory Tax Rate	21.00%	21.00%
State Statutory Tax Rate	5.44%	2.64%
Permanent Differences	(0.57)%	(0.29)%
Contract Asset	(3.07)%	0.00%
Other	(0.07)%	(0.26)%
Change in Valuation Allowance	(22.73)%	(23.11)%
Total	0.00%	(0.02)%

Net change in valuation allowance as follows (in thousands):

	December 31,	
	2021	2022
Valuation Allowance, beginning of year	$ 102,981	$ 161,749
Charges	58,768	66,827
Purchase accounting adjustments	—	15,488
Valuation Allowance, end of year	$ 161,749	$ 244,064

The Company's income tax benefit as recorded in the financial statements differs from the benefit computed by applying statutory tax rates to net loss before income taxes due to permanent differences related to the deductibility of certain expenses and the valuation allowance. There is no current income tax benefit for the years ended December 31, 2021 or 2022.

As of December 31, 2022 the Company had federal net operating loss ("NOL") carry forwards of $163.8 million (tax effected) and state NOL carry forwards of approximately $32.8 million (tax effected), which may be available to offset future taxable income. The federal NOLs will begin to expire in 2037 and the state NOLs will begin to expire in 2028. A full valuation allowance has been recorded against the NOL carry forwards.

The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. Due to its operating loss carryforwards, the U.S. federal statute of limitations remains open for tax year 2016 and onward and the Company continues to be subject to examination by the Internal Revenue Service for tax years 2016 and later. The resolutions of any examinations are not expected to be material to these financial statements. As of December 31, 2021 and 2022, there are no penalties or accrued interest recorded in the consolidated financial statements. The calculation of the Company's tax obligations involves dealing with uncertainties in the application of complex tax laws and regulations. ASC 740, Income Taxes, provides that a tax benefit from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, on the basis of the technical merits. The Company has assessed its income tax positions and recorded tax benefits for all years subject to

examination, based upon its evaluation of the facts, circumstances and information available at each period end. For those tax positions where the Company has determined there is a greater than 50% likelihood that a tax benefit will be sustained, the Company has recorded the largest amount of tax benefit that may potentially be realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is determined there is less than 50% likelihood that a tax benefit will be sustained, no tax benefit has been recognized. The Company had no uncertain tax positions during the years ended December 31, 2022 and 2021.

The Company recognizes interest and, if applicable, penalties for any uncertain tax positions. Interest and penalties are recorded as a component of income tax expense. In the years ended December 31, 2022 and 2021, the Company did not have any accrued interest or penalties associated with any unrecognized tax benefits.

The Company does not provide for U.S. income taxes on unremitted earnings of foreign subsidiaries. Unremitted earnings of foreign subsidiaries were immaterial on December 31, 2021 and 2022.

For the Nine Months Ended September 30, 2022 and 2023

Accounting for income taxes for interim periods generally requires the provision for income taxes to be determined by applying an estimate of the annual effective tax rate for the full fiscal year to income or los before income taxes, adjusted for discrete items, if any, for the reporting period. The Company updates its estimate of the annual effective tax rate each quarter and makes a cumulative adjustment in such period.

There is no current income tax expense (benefit) for the nine months ended September 30, 2022 and there is less than $0.1 million income tax expense for the nine months ended September 30, 2023.

Due to the Company's history of losses in the United States, a full valuation allowance on all of the Company's deferred tax assets, including net operating loss carryforwards and other book versus tax differences, was maintained.

14. FAIR VALUE MEASUREMENTS

The carrying amounts of financial instruments, including cash and cash equivalents, accounts receivable, finance lease obligations, minimum royalties, accounts payable, and accrued expenses approximate fair value due to the short maturity of these instruments. The carrying amounts of the related party receivable, finance lease obligations, and minimum royalties approximate fair value because the interest rates used fluctuate with market interest rates or the fixed rates are based on current rates offered to the Company for debt with similar terms and maturities.

The valuation methodologies used for the Company's assets and liabilities measured at fair value and their classification in the valuation hierarchy are summarized below:

Contingent consideration—The Company is subject to a contingent consideration arrangement to transfer non-voting shares of common stock to the former owners of AKESOgen. This arrangement was paid out in December 2022. In connection with the acquisition of Mpirik, the Company is subject to another consideration arrangement to make a cash payment in an aggregate value of $1.0 million, contingent upon Mpirik reaching a revenue target of $1.5 million for the twelve-month period ending December 31, 2023. See Note 3, Business Combinations, for further discussion of these acquisitions.

Liabilities for contingent consideration are measured at fair value each reporting period, with the acquisition date fair value included as part of the consideration transferred in the related business combination and subsequent changes in fair value recorded in earnings within operating expense on the consolidated statements of operations and comprehensive loss. The Company used a risk-neutral simulation model and

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

option pricing framework to value the contingent consideration. We classify the contingent consideration liabilities as Level 3 due to the lack of relevant observable market data over fair value inputs such as probability-weighting of payment outcomes.

Warrant liability—As discussed in Note 8, the Company issued a $100 million warrant to AstraZeneca. The warrant liability is measured at fair value each reporting period, using a Black-Scholes option pricing model which takes into consideration the likelihood of the Company completing an IPO, which would allow AstraZeneca to exercise the warrant. The following table summarizes the assumptions used in the model as of December 31, 2022 and September 30, 2023:

	December 31, 2022		September 30, 2023	
	Initial Public Offering	Stay Private	Initial Public Offering	Stay Private
Expected term (in years)	4.00	2.00	2.50	2.00
Risk-free interest rates	4.02%	4.32%	4.46%	4.40%
Expected volatility	55.00%	55.00%	55.00%	55.00%
Expected dividend yield	0.00%	0.00%	0.00%	0.00%
Scenario weighting	70.00%	30.00%	70.00%	30.00%

We classify the warrant liability as Level 3 due to the lack of relevant observable market data over fair value inputs such as the probability-weighting and expected term of the IPO and stay private scenarios.

The Term Loan Facility and the Amended Note were not recorded at fair value. The fair values of the Term Loan Facility and the Amended Note approximated their carrying values as of December 31, 2022 and September 30, 2023. Estimates of the fair values of the Term Loan Facility and the Amended Note are classified as Level 3 due to the lack of relevant observable market data over fair value inputs.

The following table summarizes liabilities that are measured at fair value on a recurring basis as of December 31, 2021 and 2022 and September 30, 2023 (in thousands):

		Fair Value Measurement at Reporting Date Using		
	December 31, 2021	Quoted Price in Active Market for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities				
Contingent consideration	$ 8,005	$ —	$ —	$ 8,005
Warrant liability	$ 37,800	$ —	$ —	$ 37,800

		Fair Value Measurement at Reporting Date Using		
	December 31, 2022	Quoted Price in Active Market for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities				
Warrant liability	$ 42,500	$ —	$ —	$ 42,500

		Fair Value Measurement at Reporting Date Using		
	September 30, 2023	Quoted Price in Active Market for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Liabilities				
Warrant liability	$ 34,500	$ —	$ —	$ 34,500

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The following table provides a reconciliation of the beginning and ending balances for the liabilities measured at fair value using significant unobservable inputs (Level 3) (in thousands):

	Contingent Consideration	Warrant Liability
Balance at December 31, 2020	$ 10,271	$ —
Settlement paid in cash	(7,500)	—
Issuance of warrant	—	37,800
Change in fair value	5,234	—
Balance at December 31, 2021	$ 8,005	$37,800

	Contingent Consideration	Warrant Liability
Balance at December 31, 2021	$ 8,005	$37,800
Change in fair value of contingent consideration	(3,701)	—
Change in fair value of warrant	—	4,700
Settlement paid in non-voting common shares	(4,304)	—
Balance at December 31, 2022	$ —	$42,500

	Warrant Liability	Contingent Consideration
Balance at December 31, 2022	$42,500	$ —
Contingent consideration from Mpirik acquisition	—	400
Change in fair value of contingent consideration	—	(400)
Change in fair value of warrant	(8,000)	—
Balance at September 30, 2023	$34,500	$ —

For the year ended December 31, 2021, the Company recognized expense of $5.2 million in selling, general and administrative expense due to the change in the fair value of the contingent consideration liability.

For the year ended December 31, 2022, the Company recognized a gain of $3.7 million in selling, general and administrative expense due to the change in fair value of contingent consideration and $4.7 million in other expense, net due to the change in the fair value of warrant liability determined by Level 3 valuation techniques.

For the nine months ended September 30, 2023, the Company recognized a gain of $0.4 million in selling, general and administrative expense due to the change in fair value of contingent consideration and a gain of $8.0 million in other income, net due to the change in the fair value of warrant liability determined by Level 3 valuation techniques.

15. RELATED PARTIES

In 2018, the Company received $1.5 million from a related party for assuming an office lease from such party. The Company is amortizing this amount over the course of its lease with the building. The Company had a remaining related liability of $1.0 million and $0.9 million for the years ended December 31, 2021 and 2022, respectively, and $0.8 million for the nine months ended September 30, 2023, respectively. Upon the adoption of ASC 842, the liability is amortized through the right-of-use asset as a reduction of rent expense over the lease term. See Note 6, Commitments and Contingencies, for additional information on the Company's operating leases. The Company subleases a portion of office space to this related party on a month-to-month basis. Sublease income received from the related party was insignificant for the years ended December 31, 2021 and 2022, and the nine months ended September 30, 2023.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

As of December 31, 2021 and 2022, and September 30, 2023, there was no amount due to related parties. As of December 31, 2021 and 2022, and September 30, 2023, respectively, the amount due from related parties was $0.4 million, $0.4 million, and $0.6 million.

Strategic Investment

On August 19, 2021, the Company entered into a related party arrangement with Pathos for the purpose of furthering the commercialization efforts of drug development. Tempus received a warrant to purchase 23,456,790 shares, or approximately 19% of the current outstanding equity in Pathos, for $.0125 per share. The warrant will automatically exercise upon a change of control (as defined therein) or upon an IPO of Pathos' securities. The Company also has an optional exercise election window during the last 10 days of the 20 year term of the warrant agreement. Pursuant to this master agreement, the Company granted Pathos a limited, non- exclusive, revocable, non-transferable right and license, without right of sublicense, to access and download certain de-identified records from the Company's proprietary database. Pathos in turn agreed to certain license fees depending on the number of de-identified records it elects to license during the term of the master agreement. Pathos also agreed to pay the Company a subscription fee equal to $0.4 million per year for access to our Lens product. The Company recognized $0.4 million and $0.3 million in revenue for this access fee in the year ended December 31, 2022 and the nine months ended September 30, 2023, respectively. The master agreement provides for an initial term of five years, with a subsequent five-year renewal provision unless the agreement is terminated. Either party may terminate the agreement after the initial five-year term by prior written notice to the other party.

In 2022, the Company entered into two additional related party arrangements with Pathos for both sequencing and other data services. The Company recognized less than $0.3 million in revenue for both arrangements for the year ended December 31, 2022 and September 30, 2023, respectively. In 2023, the Company entered into an additional related party arrangement with Pathos for other data services. The Company recognized less than $0.1 million in revenue for the nine months ended September 30, 2023.

16. SUBSEQUENT EVENTS

For its consolidated financial statements as of December 31, 2022, the Company evaluated subsequent events through April 28, 2023, the date on which these financial statements were available to be issued.

On April 25, 2023, the Company signed an amendment to its Credit Agreement with Ares which provided an additional $50 million in term debt. The Company received $48.7 million in cash, which is the aggregate principal amount of $50 million less debt issuance costs of $1.3 million. The amendment increased the interest rate on both the original $175 million borrowing as well as the additional $50 million. After giving effect to the amendment, (x) for any interest period for which the Company elects to pay interest in cash, the cash interest rate for Base Rate and Term SOFR borrowings will be the Base Rate plus 6.25% and Term SOFR plus 7.25%, respectively, and (y) for any interest period for which the Company elects to pay interest in kind, the cash interest rate for Base Rate and Term SOFR borrowings will be the Base Rate plus 4% and Term SOFR plus 5%, respectively, and the paid-in-kind interest rate will be 3.25%.

17. UNAUDITED SUBSEQUENT EVENTS

The Company evaluated subsequent events through November 13, 2023, the date on which these interim financial statements were available to be issued.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Acquisition of SEngine Precision Medicine LLC

On October 3, 2023, the Company acquired all of the issued and outstanding interests of SEngine Precision Medicine LLC ("SEngine"), a Delaware limited liability company. The acquisition gives the Company access to SEngine's meaningful organoid repository, advanced bioinformatics capabilities, and PARIS test platform. Combining these advancements with the Company's existing business will allow the Company to accelerate our shared missions of getting the right patient on the right drug at the right time, while also advancing innovation in drug development.

Consideration was made up of $2.8 million in cash and $6.6 million in shares of non-voting common stock. The transaction also includes contingent consideration of up to 35,000 additional shares of non-voting common stock, to be determined based on the per share price of the Company's non-voting common stock in a liquidity event completed prior to December 31, 2027.

Due to the limited time since the closing of the transaction, the initial accounting for the SEngine acquisition is still in process, but a significant portion of the purchase price is expected to be allocated to intangible assets and goodwill. The remaining disclosures under ASC 805, Business Combinations, will be available upon finalization of our preliminary purchase accounting in the fourth quarter of 2023.

Series G-4 Financing

On October 11, 2023, the Company authorized 4,362,476 and issued 785,245 shares of Series G-4 Preferred stock ("Series G-4 Preferred") for aggregate proceeds of $45.0 million (See Note 9, Redeemable Convertible Preferred Stock).

Amendment to Credit Agreement

On October 11, 2023, the Company signed a second amendment to its Credit Agreement with Ares which provided an additional $35.0 million in term debt. The Company received $34.1 million in cash, which is the aggregate principal amount of $35.0 million less original issue discount of $0.9 million. Terms of the second amendment are consistent with existing terms of the Credit Agreement.

Recursion Master Agreement

On November 3, 2023, the Company entered into a Master Agreement (the "Recursion Agreement") with Recursion Pharmaceuticals, Inc. ("Recursion"). Under the Recursion Agreement, the Company agreed to provide certain of its services and to license certain data to Recursion, including a limited right to access the Company's proprietary database of de-identified clinical and molecular data for certain therapeutic product development purposes. In exchange for these rights, Recursion will pay an initial license fee of $22 million and an annual license fee throughout the term of the agreement, which, together with the initial license fee, totals up to $160 million. The term of the Recursion Agreement will continue through November 3, 2028, unless terminated sooner. In addition to mutual rights to terminate for an uncured breach of the Recursion Agreement, Recursion may terminate the agreement for convenience after three years upon 90 days prior notice, subject to payment by Recursion of an early termination fee.

The initial license fee and each annual license fee are payable at Recursion's option either in the form of (x) cash, (y) shares of Recursion's Class A common stock, or (z) a combination of cash and shares of Recursion's Class A common stock in such proportion as is determined by Recursion in its sole discretion; provided that the aggregate number of shares of Recursion's Class A common stock to be issued to the Company under the Recursion Agreement shall not exceed 19.9% of the aggregate total of shares of Class A common stock and Class B common stock outstanding on November 3, 2023, or the date immediately preceding the date of any shares of Class A common stock issued pursuant to the Recursion Agreement, whichever is less. The Company has customary registration rights with respect to any shares of Recursion's Class A common stock issued pursuant to the Recursion Agreement.

Shares

Class A Common Stock

MORGAN STANLEY	*J.P. MORGAN*	*ALLEN & COMPANY LLC*
BofA SECURITIES		*TD COWEN*
STIFEL		*WILLIAM BLAIR*
LOOP CAPITAL MARKETS		*NEEDHAM & COMPANY*

Through and including , 2023 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

, 2023.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Unless otherwise indicated, all references to "Tempus," the "company," "we," "our," "us" or similar terms refer to Tempus Labs, Inc. and its subsidiaries.

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all expenses to be paid by us, other than underwriting discounts and commissions, in connection with this offering. All amounts shown are estimates except for the SEC registration fee, the FINRA filing fee and the exchange listing fee.

SEC registration fee	$ *
FINRA filing fee	*
Exchange listing fee	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees	*
Miscellaneous	*
Total	$ *

*Tobe completed by amendment.

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act. Our amended and restated certificate of incorporation that will be in effect on the closing of this offering permits indemnification of our directors, officers, employees, and other agents to the maximum extent permitted by the Delaware General Corporation Law, and our amended and restated bylaws that will be in effect on the closing of this offering provide that we will indemnify our directors and executive officers and permit us to indemnify our other officers, employees, and other agents, in each case to the maximum extent permitted by the Delaware General Corporation Law.

We have entered into indemnification agreements with our directors and executive officers, whereby we have agreed to indemnify our directors and executive officers to the fullest extent permitted by law, including indemnification against expenses and liabilities incurred in legal proceedings to which the director or executive officer was, or is threatened to be made, a party by reason of the fact that such director or executive officer is or was a director, executive officer, employee, or agent of Tempus Labs, Inc., provided that such director or executive officer acted in good faith and in a manner that the director or executive officer reasonably believed to be in, or not opposed to, the best interest of Tempus Labs, Inc. At present, there is no pending litigation or proceeding involving a director or executive officer of Tempus Labs, Inc. regarding which indemnification is sought, nor is the registrant aware of any threatened litigation that may result in claims for indemnification.

We maintain insurance policies that indemnify our directors and officers against various liabilities arising under the Securities Act and the Securities Exchange Act of 1934, as amended, that might be incurred by any director or officer in his capacity as such.

The underwriters are obligated, under certain circumstances, under the underwriting agreement to be filed as Exhibit 1.1 hereto, to indemnify us and our officers and directors against liabilities under the Securities Act.

Item 15. Recent Sales of Unregistered Securities.

The following sets forth information regarding all unregistered securities sold since January 1, 2020:

(1) We have granted, under our 2015 Plan, RSUs representing 8,893,083 shares of our Class A common stock to our employees, consultants, and directors, having a fair market value ranging from $8.26 to $54.97 per share.

(2) We have granted, under our 2015 Plan, PSUs representing 6,000,000 shares of our Class A common stock to our employees, consultants, and directors, having a fair market value ranging from $33.48 to $42.64 per share.

(3) We have granted, under our 2015 Plan, an option to purchase 210,000 shares of our Class A common stock to Revolution Growth Management Company, Inc., having an exercise price of $0.8542 per share.

(4) From February through April 2020, we issued and sold an aggregate of 2,537,290 shares of our Series G convertible preferred stock at a price per share of $38.3524, for an aggregate purchase price of approximately $97.3 million, in private placements to 20 accredited investors, exclusive of 130,370 shares repurchased by us in April 2020 at the original issue price per share, for an aggregate repurchase price of approximately $5.0 million.

(5) In November 2020 and January 2021, we issued and sold an aggregate of 3,453,139 shares of our Series G-2 convertible preferred stock at a price per share of $57.3069, for an aggregate purchase price of approximately $189.0 million, in private placements to 15 accredited investors, exclusive of the 130,876 shares repurchased by us in January 2021 at the original issue price per share, for an aggregate repurchase price of approximately $7.5 million.

(6) In June 2020, in connection with our entry into an agreement for use of Google LLC's, or Google's, Google Cloud Platform, we issued Google a convertible promissory note, or the Note, in the original principal amount of $330 million. In November 2020, in connection with our Series G-2 convertible preferred stock financing, we issued Google $80 million of our Series G-2 preferred stock in partial satisfaction of the outstanding principal amount under the Note, and we amended and restated the terms of the Note. For more information regarding the Note, see the section titled "Description of Capital Stock—Convertible Promissory Note."

(7) In November 2021, in connection with our entry into a master services agreement, we issued a warrant to AstraZeneca to purchase $100 million in shares of our Class A common stock at an exercise price equal to the price per share at which our common stock is valued in connection with the consummation of this offering.

(8) In January 2022, we entered into a unit purchase agreement with Highline Consulting, LLC, a California limited liability company, or Highline, Highline Consulting Parent, LLC, and the unitholders of Highline, which collectively we refer to as the Sellers, pursuant to which we acquired all of the issued and outstanding equity interests in Highline. Following the closing, the Sellers will be entitled to receive contingent consideration from us in an aggregate amount of up to $5.0 million, payable in a combination of cash and shares of our Class A common stock, contingent upon certain individual Sellers remaining employed by us as of the first and second anniversary of the closing.

(9) In April 2022, we issued and sold an aggregate of 1,614,114 shares of our Series G-3 convertible preferred stock at a price per share of $57.3069, for an aggregate purchase price of approximately $92.5 million, in private placements to five accredited investors.

(10) In connection with our purchase of all of the outstanding shares of AKESOgen, Inc. in December 2019, we issued 145,466 shares of Class A common stock to former stockholders of AKESOgen, Inc. in December 2022 with a fair value of approximately $3.4 million.

(11) In October 2022, in connection with our acquisition of Arterys, Inc., we issued 174,499 shares of Class A common stock to former stockholders of Arterys, Inc.

(12) In January 2023, we issued 47,965 shares of Series G-3 convertible preferred stock as payment of paid-in-kind dividends.

(13) In March 2023, in connection with an agreement and plan of merger to acquire Mpirik, we issued 130,874 shares of Class A common stock to former stockholders of Mpirik.

(14) In October 2023, in connection with our acquisition of SEngine Precision Medicine LLC, we issued 186,137 shares of Class A common stock to former stockholders of SEngine Precision Medicine LLC.

(15) In October 2023, we issued and sold an aggregate of 785,245 shares of our Series G-4 convertible preferred stock at a price per share of $57.3069, for an aggregate purchase price of approximately $45.0 million, in private placements to three accredited investors.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. Unless otherwise specified above, we believe these transactions were exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act (and Regulation D or Regulation S promulgated thereunder) or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or under benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed on the share certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

See the Exhibit Index on the page immediately preceding the signature page for a list of exhibits filed as part of this registration statement on Form S-1, which Exhibit Index is incorporated herein by reference.

(b) Financial Statement Schedules.

All financial statement schedules are omitted because the information required to be set forth therein is not applicable or is shown in the consolidated financial statements or the notes thereto.

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, and controlling persons of the registrant under the foregoing provisions or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance on Rule 430A and contained

in a form of prospectus filed by the registrant under Rule 424(b)(1) or (4) or 497(h) under the Securities Act will be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus will be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time will be deemed to be the initial bona fide offering thereof.

EXHIBIT INDEX

Exhibit Number	Description
1.1*	Form of Underwriting Agreement.
3.1	Eleventh Amended and Restated Certificate of Incorporation of Tempus Labs, Inc., as amended, as currently in effect.
3.2**	Form of Amended and Restated Certificate of Incorporation of Tempus Labs, Inc., to be in effect on the closing of the offering.
3.3**	Amended and Restated Bylaws of Tempus Labs, Inc., as currently in effect.
3.4**	Form of Amended and Restated Bylaws of Tempus Labs, Inc., to be in effect on the closing of the offering.
4.1*	Form of Class A Common Stock Certificate.
4.2**	Warrant to Purchase Class A Common Stock of Tempus Labs, Inc. dated November 17, 2021 (included in Exhibit 10.16).
5.1*	Opinion of Cooley LLP.
10.1	Eleventh Amended and Restated Investor Rights Agreement, dated October 11, 2023.
10.2+**	Tempus Labs, Inc. Third Amended and Restated 2015 Stock Plan, as amended.
10.3+**	Forms of Grant Notices and Award Agreements under the Tempus Labs, Inc. Third Amended and Restated 2015 Stock Plan, as amended.
10.4+**	Tempus Labs, Inc. 2022 Equity Incentive Plan.
10.5+**	Forms of Grant Notice, Stock Option Agreement and Notice of Exercise under the Tempus Labs, Inc. 2022 Equity Incentive Plan.
10.6+**	Forms of Restricted Stock Unit Grant Notice and Award Agreement under the Tempus Labs, Inc. 2022 Equity Incentive Plan.
10.7+**	Form of Indemnification Agreement entered into by and between Tempus Labs, Inc. and each director and executive officer.
10.8+**	Employment Agreement, by and between Tempus Labs, Inc. and Eric Lefkofsky, dated January 1, 2022.
10.9+	Employment Agreement, by and between Tempus Labs, Inc. and Erik Phelps, dated January 1, 2023.
10.10+	Employment Agreement, by and between Tempus Labs, Inc. and Ryan Fukushima, dated January 1, 2023.
10.11+	Employment Agreement, by and between Tempus Labs, Inc. and James Rogers, dated January 1, 2023.
10.12#**	Agreement of Lease, by and between Tempus Labs, Inc. and EQC 600 West Chicago Property LLC, dated January 18, 2018, as amended.
10.13†**	Supply Agreement, by and between Tempus Labs, Inc. and Illumina, Inc., dated June 29, 2021.
10.14†**	Amended and Restated Convertible Promissory Note, by and between Tempus Labs, Inc. and Google LLC, dated November 19, 2020.
10.15†**	Master Agreement, by and between Tempus Labs, Inc. and Pathos AI, Inc., dated August 19, 2021.
10.16†**	Master Services Agreement, by and between Tempus Labs, Inc. and AstraZeneca AB, dated November 17, 2021.
10.17+**	Tempus Labs, Inc. 2022 Employee Stock Purchase Plan.

Exhibit Number	Description
10.18†**	Strategic Collaboration Agreement, by and between Tempus Labs, Inc. and Glaxosmithkline LLC, dated August 1, 2022.
10.19#**	Credit Agreement, by and among Tempus Labs, Inc., the lenders party thereto, Ares Capital Corporation and Ares Capital Management LLC, dated September 22, 2022.
10.20#**	Limited Waiver and First Amendment to Credit Agreement, by and among Tempus Labs, Inc., the loan party signatories and lenders party thereto, and Ares Capital Corporation as administrative agent, dated April 25, 2023.
10.21#	Second Amendment to Credit Agreement, by and among Tempus Labs, Inc., the loan party signatories and lenders party thereto, and Ares Capital Corporation as administrative agent, dated October 11, 2023.
10.22†	Master Agreement, by and between Tempus Labs, Inc. and Recursion Pharmaceuticals, Inc., dated November 3, 2023.
21.1**	List of Subsidiaries of Tempus Labs, Inc.
23.1*	Consent of PricewaterhouseCoopers, LLP, independent registered public accounting firm.
23.2*	Consent of Cooley LLP (included in Exhibit 5.1).
24.1*	Power of Attorney (included on page II-7).
107*	Filing Fee Table.

* To be submitted by amendment.
** Previously submitted.
\+ Indicates management contract or compensatory plan.
† Certain portions of this exhibit (indicated by asterisks) have been omitted because they are not material and are the type that the registrant treats as private or confidential.
# Certain schedules and exhibits to this exhibit have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Chicago, Illinois, on , 2023.

TEMPUS LABS, INC.

By: _____
Name: Eric Lefkofsky
Title: Chief Executive Officer, Founder and Chairman

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Eric Lefkofsky and James Rogers, and each one of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to sign any registration statement for the same offering covered by this registration statement that is to be effective on filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
_____ Eric Lefkofsky	Chief Executive Officer, Founder and Chairman (*Principal Executive Officer*)	, 2023
_____ James Rogers	Chief Financial Officer (*Principal Financial Officer*)	, 2023
_____ Ryan Bartolucci	Chief Accounting Officer (*Principal Accounting Officer*)	, 2023
_____ Peter J. Barris	Director	, 2023
_____ Eric D. Belcher	Director	, 2023
_____ Jennifer A. Doudna, Ph.D.	Director	, 2023
_____ Wayne A.I. Frederick, M.D.	Director	, 2023

Signature	Title	Date
Robert Ghenchev	Director	, 2023
Scott Gottlieb, M.D.	Director	, 2023
Theodore J. Leonsis	Director	, 2023
Nadja West, M.D.	Director	, 2023

ELEVENTH AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF TEMPUS LABS, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Tempus Labs, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "***DGCL***"),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Tempus Labs, Inc., and that this corporation was originally incorporated pursuant to the DGCL on September 21, 2015 under the name Bioin, Inc.

2. That the original Certificate of Incorporation of this corporation was amended by a Certificate of Amendment filed with the Secretary of State of the State of Delaware on September 29, 2015 and was further amended by a Certificate of Amendment filed with the Secretary of State of the State of Delaware on February 12, 2016. The Amended and Restated Certificate of Incorporation was filed on June 20, 2016 and was amended by a Certificate of Amendment filed with the Secretary of State of the State of Delaware on October 6, 2016. The Second Amended and Restated Certificate of Incorporation was filed on November 22, 2016 with the Secretary of State of the State of Delaware. The Third Amended and Restated Certificate of Incorporation was filed on April 17, 2017 with the Secretary of State of the State of Delaware. The Fourth Amended and Restated Certificate of Incorporation was filed on September 8, 2017 with the Secretary of State of the State of Delaware. The Fifth Amended and Restated Certificate of Incorporation was filed on March 16, 2018 with the Secretary of State of the State of Delaware. The Sixth Amended and Restated Certificate of Incorporation was filed on August 23, 2018 with the Secretary of State of the State of Delaware. The Seventh Amended and Restated Certificate of Incorporation was filed on April 30, 2019 with the Secretary of State of the State of Delaware. The Eighth Amended and Restated Certificate of Incorporation was filed on February 6, 2020 with the Secretary of State of the State of Delaware. The Ninth Amended and Restated Certificate of Incorporation was filed on November 19, 2020 with the Secretary of State of the State of Delaware, and was further amended by a Certificate of Amendment filed with the Secretary of State of the State of Delaware on March 15, 2021. The Tenth Amended and Restated Certificate of Incorporation was filed on April 18, 2022 with the Secretary of State of the State of Delaware.

3. That the Board of Directors duly adopted resolutions proposing to amend and restate the Tenth Amended and Restated Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Tenth Amended and Restated Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Tempus Labs, Inc. (the "***Corporation***").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The purpose of the Corporation shall be to engage in any lawful act or activity for which a corporation may be organized under the DGCL.

FOURTH: The Corporation is authorized to issue four classes of stock to be designated, respectively, "Class A Common Stock," "Class B Common Stock," "Nonvoting Common Stock" and "Preferred Stock." The total number of shares of all classes of stock which the Corporation is authorized to issue is 342,353,315 shares, of which (i) 200,228,024 shares shall be Class A Common Stock (the "***Class A Common Stock***"), (ii) 5,374,899 shares shall be Class B Common Stock (the "***Class B Common Stock***"), (iii) 66,946,627 shares shall be Nonvoting Common Stock (the "***Nonvoting Common Stock***"), and (iv) 69,803,765 shares shall be Preferred Stock ("***Preferred Stock***").

FIFTH: Each share of Class A Common Stock and Class B Common Stock (referred to herein, collectively, as the "***Voting Common Stock***") shall have a par value of $0.0001 per share. Each share of Nonvoting Common Stock shall have a par value of $0.0001 per share. The Voting Common Stock and Nonvoting Common Stock are referred to herein, collectively, as the "***Common Stock***".

SIXTH: 10,000,000 of the authorized shares of Preferred Stock are hereby designated "Series A Preferred Stock" (referred to herein as the "***Series A Preferred Stock***"), 5,374,899 of the authorized shares of Preferred Stock are hereby designated "Series B Preferred Stock" (referred to herein as the "***Series B Preferred Stock***"), 2,500,000 of the authorized shares of Preferred Stock are hereby designated "Series B-1 Preferred Stock" (referred to herein as the "***Series B-1 Preferred Stock***"), 4,191,173 of the authorized shares of Preferred Stock are hereby designated "Series B-2 Preferred Stock" (referred to herein as the "***Series B-2 Preferred Stock***"), 9,779,403 of the authorized shares of Preferred Stock are hereby designated "Series C Preferred Stock" (referred to herein as the "***Series C Preferred Stock***"), 8,534,330 of the authorized shares of Preferred Stock are hereby designated "Series D Preferred Stock" (referred to herein as the "***Series D Preferred Stock***"), 6,630,905 of the authorized shares of Preferred Stock are hereby designated "Series E Preferred Stock" (referred to herein as the "***Series E Preferred Stock***"), 8,077,674 of the authorized shares of Preferred Stock are hereby designated "Series F Preferred Stock" (referred to herein as the "***Series F Preferred Stock***"), 2,537,290 of the authorized shares of Preferred Stock are hereby designated "Series G Preferred Stock" (referred to herein as the "***Series G Preferred Stock***"), 3,453,139 of the authorized shares of Preferred Stock are hereby designated "Series G-2 Preferred Stock" (referred to herein as the "***Series G-2 Preferred Stock***"), 4,362,476 of the authorized shares of Preferred Stock are hereby designated "Series G-3 Preferred Stock" (referred to herein as the "***Series G-3 Preferred Stock***"), and 4,362,476 of the authorized shares of Preferred Stock are hereby designated "Series G-4 Preferred Stock" (referred to herein as the "***Series G-4***

Preferred Stock"). Each share of Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series B-2 Preferred Stock, Series C Preferred Stock, Series D Preferred Stock, Series E Preferred Stock, Series F Preferred Stock, Series G Preferred Stock, Series G-2 Preferred Stock, Series G-3 Preferred Stock and Series G-4 Preferred Stock shall have a par value of $0.0001 per share.

SEVENTH: The rights, preferences, privileges, restrictions and other matters relating to the Common Stock and Preferred Stock are as follows:

A. COMMON STOCK

The Common Stock shall have the following rights, preferences, powers, privileges and restrictions, qualifications and limitations.

1. General. The voting, dividend, liquidation and other rights, powers and preferences of the holders of the Class A Common Stock, Class B Common Stock and Nonvoting Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein. Except as otherwise provided in this Eleventh Amended and Restated Certificate of Incorporation, as amended (the "***Restated Certificate***"), or required by applicable law, shares of Class A Common Stock, Class B Common Stock and Nonvoting Common Stock shall have the same rights, privileges and powers, rank equally (including as to dividends and distributions, and upon any liquidation, dissolution, distribution of assets or winding up of the Corporation), share ratably and be identical in all respects and as to all matters.

2. Voting. Except as otherwise required by applicable law, at all meetings of stockholders and on all matters submitted to a vote of stockholders of the Corporation generally (including written actions in lieu of meetings), each holder of the Class A Common Stock shall be entitled to one (1) vote for each share of Class A Common Stock held of record by such holder, and each holder of Class B Common Stock shall be entitled to fifteen (15) votes for each share of Class B Common Stock held of record by such holder. Except as otherwise required by applicable law or provided in this Restated Certificate, the holders of shares of Class A Common Stock and Class B Common Stock, as such, shall (a) at all times vote together as a single class on all matters (including the election of directors) submitted to a vote of the stockholders of the Corporation generally, (b) be entitled to notice of any stockholders' meeting in accordance with the Amended and Restated Bylaws of the Corporation (as the same may be amended and/or restated from time to time, the "***Bylaws***"), and (c) be entitled to vote upon such matters and in such manner as may be provided by applicable law; provided, however, that, except as otherwise required by law, holders of Voting Common Stock, as such, shall not be entitled to vote on any amendment to this Restated Certificate that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to the Restated Certificate or pursuant to the DGCL. The holders of Nonvoting Common Stock shall have no voting rights, except as required by law. There shall be no cumulative voting. Subject to Sections 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10 and 3.11 of Part B below, the number of authorized shares of Class A Common Stock, Class B Common Stock, Nonvoting Common Stock or Preferred Stock may be increased or decreased (but not below (i) the number of shares thereof then outstanding and (ii) with respect to the Class A Common Stock, the number of shares of Class A Common Stock

reserved pursuant to Section 4 of Part A of this Article Seventh) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of this Restated Certificate) the affirmative vote of the holders of capital stock representing a majority of the voting power of all the then-outstanding shares of capital stock of the Corporation entitled to vote thereon, irrespective of the provisions of Section 242(b)(2) of DGCL, and no vote of the holders of any shares of Nonvoting Common Stock, voting as a separate class, shall be required therefor.

3. Conversion.

3.1 Optional Conversion of Class B Common Stock. Each share of Class B Common Stock shall be convertible into one (1) fully paid and nonassessable share of Class A Common Stock at the option of the holder thereof at any time upon written notice to the Corporation. Before any holder of Class B Common Stock shall be entitled to convert any shares of Class B Common Stock into shares of Class A Common Stock, such holder shall surrender the certificate or certificates therefor (if any), duly endorsed, at the principal corporate office of the Corporation or of any transfer agent for the Class B Common Stock, and shall provide written notice to the Corporation at its principal corporate office, of such conversion election and shall state therein the name or names (i) in which the certificate or certificates representing the shares of Class A Common Stock into which the shares of Class B Common Stock are so converted are to be issued (if such shares of Class A Common Stock are certificated) or (ii) in which such shares of Class A Common Stock are to be registered in book-entry form (if such shares of Class A Common Stock are uncertificated). If the shares of Class A Common Stock into which the shares of Class B Common Stock are to be converted are to be issued in a name or names other than the name of the holder of the shares of Class B Common Stock being converted, such notice shall be accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the holder. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder, or to the nominee or nominees of such holder, a certificate or certificates representing the number of shares of Class A Common Stock to which such holder shall be entitled upon such conversion (if such shares of Class A Common Stock are certificated) or shall register such shares of Class A Common Stock in book-entry form (if such shares of Class A Common Stock are uncertificated). Such conversion shall be deemed to be effective immediately prior to the close of business on the date of such surrender of the shares of Class B Common Stock to be converted following or contemporaneously with the provision of written notice of such conversion election as required by this Section 3.1, the shares of Class A Common Stock issuable upon such conversion shall be deemed to be outstanding as of such time, and the Person or Persons entitled to receive the shares of Class A Common Stock issuable upon such conversion shall be deemed to be the record holder or holders of such shares of Class A Common Stock as of such time.

3.2 Automatic Conversion of Class B Common Stock. Each share of Class B Common Stock shall automatically, without further action by the Corporation or the holder thereof, convert into one (1) fully paid and nonassessable share of Class A Common Stock upon the occurrence of any event described below:

3.2.1 the date that is twenty (20) years from the Effective Time;

3.2.2 the first date on which Eric P. Lefkofsky and his Controlled Affiliates (as defined in Section 5.1.1(g) below) collectively own less than 10,000,000 shares of capital stock of the Corporation, as adjusted for any stock splits, stock dividends, combinations, subdivisions, recapitalizations or the like;

3.2.3 the date on which Eric P. Lefkofsky is no longer providing services to the Company as an executive officer or member of the Board of Directors (the "***Board***"); or

3.2.4 any sale, assignment, transfer, conveyance, hypothecation or other disposition of any legal or beneficial interest in such share, whether or not for value and whether voluntary or involuntary or by operation of law (a "***Transfer***"), other than a Transfer by a holder of Class B Common Stock to any of its Controlled Affiliates.

3.3 Mandatory Conversion of Nonvoting Common Stock. All outstanding shares of Nonvoting Common Stock shall automatically be converted into shares of Class A Common Stock at the Nonvoting Mandatory Conversion Time (as defined below). Section 5 of Part B of this Article Seventh states the mandatory conversion conditions and mechanics.

4. Reservation of Stock. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Class A Common Stock, solely for the purpose of effecting the conversion of the shares of Class B Common Stock, such number of shares of Class A Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of Class B Common Stock into shares of Class A Common Stock.

B. PREFERRED STOCK

The Preferred Stock shall have the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "Sections" in this Part B of this Article Seventh refer to sections of Part B of this Article Seventh.

1. Dividends.

1.1 Series G-4 PIK Dividends. From and after the date that is twelve (12) months following the issuance of each share of Series G-4 Preferred Stock, dividends shall accrue on such share of Series G-4 Preferred Stock, at the rate of five and one-quarter percent (5.25%) per annum on the sum of (i) the Series G-4 Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) plus (ii) all accrued but unpaid dividends thereon. Such dividends on the shares of Series G-4 Preferred Stock shall accrue from day to day, whether or not declared and whether or not there are any funds of the Corporation legally available for the payment of dividends, and shall be cumulative. To the extent permitted by applicable law, the Corporation shall pay all of the accrued dividends on shares of Series G-4 Preferred Stock in fully paid and non-assessable shares of Series G-4 Preferred Stock (such dividends being the "***Series G-4 PIK Dividends***"). The Series G-4 PIK Dividends shall be paid by delivering to each record holder of shares of Series G-4 Preferred Stock a number of whole shares of Series G-4 Preferred Stock determined by dividing (x) the accrued and unpaid dividends on the Series G-4

Preferred Stock on the applicable Series G-4 Dividend Payment Date by (y) the Series G-4 Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series), on January 15 of each year (or the following business day, each such date, a "***Series G-4 Dividend Payment Date***"). If and to the extent that any portion of the accrued but unpaid dividends required to be paid on a Series G-4 Dividend Payment Date are not paid on such Series G-4 Dividend Payment Date, such unpaid portion of the dividends on the Series G-4 Preferred Stock shall accumulate and compound on the applicable Series G-4 Dividend Payment Date and subject to the provisions of this subsection shall be payable on the following Series G-4 Dividend Payment Date, in each case whether or not declared by the Board. All Series G-4 PIK Dividends on the shares of Series G-4 Preferred Stock shall be prior to and in preference to any dividend paid with respect to shares of Series G-3 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock, Series A Preferred Stock, Common Stock or any other class or series of capital stock of the Corporation ranking junior to shares of Series G-4 Preferred Stock in respect of payment of dividends, and except as provided herein, shall be paid before any dividends are declared and paid, or any other distributions or redemptions are made, with respect to shares of Series A Preferred Stock, Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock) or other classes or series of capital stock of the Corporation ranking junior to shares of Series G-4 Preferred Stock in respect of payment of dividends; provided, however, that for clarity, Series F Accruing Dividends, Series E Accruing Dividends, Series D Accruing Dividends, Series C Accruing Dividends, Series B-2 Accruing Dividends, Series B-1 Accruing Dividends, Series B Accruing Dividends, and Series A Accruing Dividends may be paid in respect of shares of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, and Series A Preferred Stock to the extent holders of such shares have so elected to receive current cash payments (or to continue to receive current cash payments) as provided in the applicable subsections of this Section 1.

1.2 Series G-3 PIK Dividends. From and after the date of the issuance of any share of Series G-3 Preferred Stock, dividends shall accrue on such share of Series G-3 Preferred Stock, at the rate of four percent (4.0%) per annum on the sum of (i) the Series G-3 Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) plus (ii) all accrued but unpaid dividends thereon. Such dividends on the shares of Series G-3 Preferred Stock shall accrue from day to day, whether or not declared and whether or not there are any funds of the Corporation legally available for the payment of dividends, and shall be cumulative. To the extent permitted by applicable law, the Corporation shall pay all of the accrued dividends on shares of Series G-3 Preferred Stock in fully paid and non-assessable shares of Series G-3 Preferred Stock (such dividends being the "***Series G-3 PIK Dividends***"). The Series G-3 PIK Dividends shall be paid by delivering to each record holder of shares of Series G-3 Preferred Stock a number of whole shares of Series G-3 Preferred Stock determined by dividing (x) the accrued and unpaid dividends on the Series G-3 Preferred Stock on the applicable Series G-3 Dividend Payment Date by (y) the Series G-3 Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series), on January 15 of each year (or the following business day, each such date, a "***Series G-3 Dividend Payment Date***"). If and to the extent that any portion of the accrued but unpaid dividends

required to be paid on a Series G-3 Dividend Payment Date are not paid on such Series G-3 Dividend Payment Date, such unpaid portion of the dividends on the Series G-3 Preferred Stock shall accumulate and compound on the applicable Series G-3 Dividend Payment Date and subject to the provisions of this subsection shall be payable on the following Series G-3 Dividend Payment Date, in each case whether or not declared by the Board. All Series G-3 PIK Dividends on the shares of Series G-3 Preferred Stock shall be prior to and in preference to any dividend paid with respect to shares of Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock, Series A Preferred Stock, Common Stock or any other class or series of capital stock of the Corporation ranking junior to shares of Series G-3 Preferred Stock in respect of payment of dividends, and except as provided herein, shall be paid before any dividends are declared and paid, or any other distributions or redemptions are made, with respect to shares of Series A Preferred Stock, Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock) or other classes or series of capital stock of the Corporation ranking junior to shares of Series G-3 Preferred Stock in respect of payment of dividends; provided, however, that for clarity, Series F Accruing Dividends, Series E Accruing Dividends, Series D Accruing Dividends, Series C Accruing Dividends, Series B-2 Accruing Dividends, Series B-1 Accruing Dividends, Series B Accruing Dividends, and Series A Accruing Dividends may be paid in respect of shares of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, and Series A Preferred Stock to the extent holders of such shares have so elected to receive current cash payments (or to continue to receive current cash payments) as provided in the applicable subsections of this Section 1.

1.3 Accruing Series G Dividends. From and after the date of the issuance of any share of Series G Preferred Stock, dividends shall accrue on such share of Series G Preferred Stock, at the rate of six percent (6.0%) per annum on the sum of (i) the Series G Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) plus (ii) all accrued but unpaid dividends thereon (the "***Series G Accruing Dividends***"). Series G Accruing Dividends shall accrue from day to day, whether or not declared and whether or not there are any funds of the Corporation legally available for the payment of dividends, and shall be cumulative; provided, however, that except as set forth in Subsection 2.4, Subsection 2.5, Subsection 2.6, Subsection 2.7, Subsection 2.8, Subsection 2.9, Subsection 2.10, Subsection 2.11, Subsection 4.3.1, Subsection 5.2 and Section 6, such Series G Accruing Dividends shall be payable only when, as and if declared by the Board of Directors of the Corporation. All Series G Accruing Dividends on the shares of Series G Preferred Stock shall be *pari passu* to any dividend paid with respect to shares of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock and prior to and in preference to any dividend on any shares of Series A Preferred Stock, Common Stock or any other class or series of capital stock of the Corporation ranking junior to shares of Series G Preferred Stock in respect of payment of dividends, and except as provided herein, shall be paid before any dividends are declared and paid, or any other distributions or redemptions are made, with respect to shares of Series A Preferred Stock, Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock) or other classes or series of capital stock of the Corporation ranking junior to shares of Series G Preferred Stock in respect of payment of dividends; provided, however, that for clarity, Series F Accruing Dividends,

Series E Accruing Dividends, Series D Accruing Dividends, Series C Accruing Dividends, Series B-2 Accruing Dividends, Series B-1 Accruing Dividends, Series B Accruing Dividends, and Series A Accruing Dividends may be paid in respect of shares of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, and Series A Preferred Stock to the extent holders of such shares have so elected to receive current cash payments (or to continue to receive current cash payments) as provided in the applicable subsections of this Section 1.

1.4 Accruing Series F Dividends, Accruing Series E Dividends, Accruing Series D Dividends and Accruing Series C Dividends. From and after the date of the issuance of any share of Series F Preferred Stock, any share of Series E Preferred Stock, any share of Series D Preferred Stock and any share of Series C Preferred Stock, dividends shall accrue on such share of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock or Series C Preferred Stock, as applicable, at the rate of six percent (6.0%) per annum on the sum of (i) the Series F Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series), the Series E Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series), the Series D Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series), or the Series C Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series), as applicable, plus (ii) all accrued but unpaid dividends thereon (as applicable, the "***Series F Accruing Dividends***," "***Series E Accruing Dividends***," "***Series D Accruing Dividends***" or the "***Series C Accruing Dividends***"). Series F Accruing Dividends, Series E Accruing Dividends, Series D Accruing Dividends and Series C Accruing Dividends shall accrue from day to day, whether or not declared and whether or not there are any funds of the Corporation legally available for the payment of dividends, and shall be cumulative; provided, however, that except as set forth in Subsection 2.5, Subsection 2.6, Subsection 2.7, Subsection 2.8, Subsection 2.9, Subsection 2.10, Subsection 2.11, Subsection 4.3.1, Subsection 5.2 and Section 6, or unless a holder of shares of Preferred Stock has made a prior written election delivered to the Corporation to receive payment of such accrued dividends in cash, such Series F Accruing Dividends, Series E Accruing Dividends, Series D Accruing Dividends and Series C Accruing Dividends shall be payable only when, as and if declared by the Board of Directors of the Corporation. If and to the extent that a holder has made such election, the Corporation shall pay all of the Series F Accruing Dividends, the Series E Accruing Dividends, the Series D Accruing Dividends and the Series C Accruing Dividends on the applicable shares of Preferred Stock held by such holder in cash on January 15 of each year (or the following business day, each such date, a "***Dividend Payment Date***"), but only to the extent out of funds legally available therefor; provided, that in the event any such holder makes such election, the Series F Accruing Dividends, the Series E Accruing Dividends, the Series D Accruing Dividends and the Series C Accruing Dividends with respect to the applicable shares of Preferred Stock held by such holder shall accrue on such shares at the rate of five percent (5.0%) per annum rather than six percent (6.0%) per annum. If and to the extent that any portion of the accrued but unpaid dividends required to be paid on a Dividend Payment Date are not paid on such Dividend Payment Date, such unpaid portion of the Series F Accruing Dividends, Series E Accruing Dividends, Series D Accruing Dividends or Series C Accruing Dividends shall accumulate and compound on the applicable Dividend Payment Date and subject to the provisions

of this subsection shall be payable on the following Dividend Payment Date, in each case whether or not declared by the Board of Directors of the Corporation. All Series F Accruing Dividends on the shares of Series F Preferred Stock, Series E Accruing Dividends on the shares of Series E Preferred Stock, Series D Accruing Dividends on the shares of Series D Preferred Stock and Series C Accruing Dividends on the shares of Series C Preferred Stock shall be *pari passu* to any dividend paid with respect to each other and with respect to shares of Series G Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock and prior to and in preference to any dividend on any shares of Series A Preferred Stock, Common Stock or any other class or series of capital stock of the Corporation ranking junior to shares of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock and Series C Preferred Stock in respect of payment of dividends, and except as provided herein, shall be paid before any dividends are declared and paid, or any other distributions or redemptions are made, with respect to shares of Series A Preferred Stock, Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock) or other classes or series of capital stock of the Corporation ranking junior to shares of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock and Series C Preferred Stock in respect of payment of dividends; provided, however, that for clarity, Series B-2 Accruing Dividends, Series B-1 Accruing Dividends, Series B Accruing Dividends, and Series A Accruing Dividends may be paid in respect of shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, and Series A Preferred Stock to the extent holders of such shares have so elected to receive current cash payments (or to continue to receive current cash payments) as provided in the applicable subsections of this Section 1.

1.5 Accruing Series B-2 Dividends. From and after the date of the issuance of any share of Series B-2 Preferred Stock, dividends shall accrue on such share of Series B-2 Preferred Stock at the rate of five percent (5.0%) per annum on the sum of (i) the Series B-2 Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) plus (ii) all accrued but unpaid dividends thereon (the "***Series B-2 Accruing Dividends***"). Series B-2 Accruing Dividends shall accrue from day to day, whether or not declared and whether or not there are any funds of the Corporation legally available for the payment of dividends, and shall be cumulative. All Series B-2 Accruing Dividends shall be paid in cash on each Dividend Payment Date, but only to the extent out of funds legally available therefor, or upon a Liquidation Event, Deemed Liquidation Event or conversion, as set forth herein; provided, however, that the holders of a majority of the outstanding shares of Series B-2 Preferred Stock may elect, in their sole discretion and on behalf of all of the holders of shares of Series B-2 Preferred Stock, for the Corporation to not pay all or any portion of the Series B-2 Accruing Dividends upon ten (10) days' advance notice to the Board of Directors of the Corporation. If and to the extent that any portion of the Series B-2 Accruing Dividends are not paid on a Dividend Payment Date by reason of such election or otherwise, such unpaid portion of the Series B-2 Accruing Dividends shall accumulate and compound on the applicable Dividend Payment Date whether or not declared by the Board of Directors of the Corporation. All Series B-2 Accruing Dividends on the shares of Series B-2 Preferred Stock shall be *pari passu* to any dividend paid with respect to shares of Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock and prior to and in preference to any dividend on any shares of Series A Preferred Stock, Common Stock or any other class or series of capital stock of the Corporation ranking junior to shares of Series B-2

Preferred Stock in respect of payment of dividends, and except as provided herein, shall be paid before any dividends are declared and paid, or any other distributions or redemptions are made, with respect to shares of Series A Preferred Stock or Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock) or other classes or series of capital stock of the Corporation ranking junior to shares of Series B-2 Preferred Stock in respect of payment of dividends; provided, however, that for clarity, Series B-1 Accruing Dividends, Series B Accruing Dividends, and Series A Accruing Dividends may be paid in respect of shares of Series B-1 Preferred Stock, Series B Preferred Stock, and Series A Preferred Stock to the extent holders of such shares have so elected to receive current cash payments (or to continue to receive current cash payments) as provided in the applicable subsections of this Section 1.

1.6 Accruing Series B-1 Dividends. From and after the date of the issuance of any share of Series B-1 Preferred Stock, dividends shall accrue on such share of Series B-1 Preferred Stock at the rate of five percent (5.0%) per annum on the sum of (i) the Series B-1 Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) plus (ii) all accrued but unpaid dividends thereon (the "***Series B-1 Accruing Dividends***"). Series B-1 Accruing Dividends shall accrue from day to day, whether or not declared and whether or not there are any funds of the Corporation legally available for the payment of dividends, and shall be cumulative. All Series B-1 Accruing Dividends shall be paid in cash on each Dividend Payment Date, but only to the extent out of funds legally available therefor, or upon a Liquidation Event, Deemed Liquidation Event or conversion, as set forth herein; provided, however, that the holders of a majority of the outstanding shares of Series B-1 Preferred Stock may elect, in their sole discretion and on behalf of all of the holders of shares of Series B-1 Preferred Stock, for the Corporation to not pay all or any portion of the Series B-1 Accruing Dividends upon ten (10) days' advance notice to the Board of Directors of the Corporation. If and to the extent that any portion of the Series B-1 Accruing Dividends are not paid on a Dividend Payment Date by reason of such election or otherwise, such unpaid portion of the Series B-1 Accruing Dividends shall accumulate and compound on the applicable Dividend Payment Date whether or not declared by the Board of Directors of the Corporation. All Series B-1 Accruing Dividends on the shares of Series B-1 Preferred Stock shall be *pari passu* to any dividend paid with respect to shares of Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock and Series B Preferred Stock and prior to and in preference to any dividend on any shares of Series A Preferred Stock, Common Stock or any other class or series of capital stock of the Corporation ranking junior to shares of Series B-1 Preferred Stock in respect of payment of dividends, and except as provided, herein, shall be paid before any dividends are declared and paid, or any other distributions or redemptions are made, with respect to shares of Series A Preferred Stock or Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock) or other classes or series of capital stock of the Corporation ranking junior to shares of Series B-1 Preferred Stock in respect of payment of dividends; provided, however, that for clarity, Series B Accruing Dividends and Series A Accruing Dividends may be paid in respect of shares of Series B Preferred Stock and Series A Preferred Stock to the extent holders of such shares have so elected to receive current cash payments (or to continue to receive current cash payments) as provided in the applicable subsections of this Section 1.

1.7 Accruing Series B Dividends. From and after the date of the issuance of any share of Series B Preferred Stock, dividends shall accrue on such share of Series B Preferred Stock at the rate of five percent (5.0%) per annum on the sum of (i) the Series B Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) plus (ii) all accrued but unpaid dividends thereon (the "***Series B Accruing Dividends***"). Series B Accruing Dividends shall accrue from day to day, whether or not declared and whether or not there are any funds of the Corporation legally available for the payment of dividends, and shall be cumulative. All Series B Accruing Dividends shall be paid in cash on each Dividend Payment Date, but only to the extent out of funds legally available therefor, or upon a Liquidation Event, Deemed Liquidation Event or conversion, as set forth herein; provided, however, that the holders of a majority of the outstanding shares of Series B Preferred Stock may elect, in their sole discretion and on behalf of all of the holders of shares of Series B Preferred Stock, for the Corporation to not pay all or any portion of the Series B Accruing Dividends upon ten (10) days' advance notice to the Board of Directors of the Corporation. If and to the extent that any portion of the Series B Accruing Dividends are not paid on a Dividend Payment Date by reason of such election or otherwise, such unpaid portion of the Series B Accruing Dividends shall accumulate and compound on the applicable Dividend Payment Date whether or not declared by the Board of Directors of the Corporation. All Series B Accruing Dividends on the shares of Series B Preferred Stock shall be *pari passu* to any dividend paid with respect to shares of Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock and Series B-1 Preferred Stock and prior to and in preference to any dividend on any shares of Series A Preferred Stock, Common Stock or any other class or series of capital stock of the Corporation ranking junior to shares of Series B Preferred Stock in respect of payment of dividends, and except as provided herein, shall be paid before any dividends are declared and paid, or any other distributions or redemptions are made, with respect to shares of Series A Preferred Stock or Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock) or other classes or series of capital stock of the Corporation ranking junior to shares of Series B Preferred Stock in respect of payment of dividends; provided, however, that for clarity, Series A Accruing Dividends may be paid in respect of shares of Series A Preferred Stock to the extent holders of such shares have so elected to receive current cash payments (or to continue to receive current cash payments) as provided in the applicable subsections of this Section 1.

1.8 Accruing Series A Dividends. From and after the date of the issuance of any share of Series A Preferred Stock, dividends shall accrue on such share of Series A Preferred Stock at the rate of five percent (5.0%) per annum on the sum of (i) the Series A Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) plus (ii) all accrued but unpaid dividends thereon (the "***Series A Accruing Dividends***"). Series A Accruing Dividends shall accrue from day to day, whether or not declared and whether or not there are any funds of the Corporation legally available for the payment of dividends, and shall be cumulative. All Series A Accruing Dividends shall be paid in cash on each Dividend Payment Date, but only (i) after the payment of all Series G Accruing Dividends, Series F Accruing Dividends, Series E Accruing Dividends, Series D Accruing Dividends, Series C Accruing Dividends, Series B-2 Accruing Dividends, Series B-1 Accruing Dividends and Series B Accruing Dividends, in each case, to the extent required to be paid on such Dividend Payment Date and (ii) to the extent out of

funds legally available therefor, or upon a Liquidation Event, Deemed Liquidation Event or conversion, as set forth herein; provided, however, that the holders of a majority of the outstanding shares of Series A Preferred Stock may elect, in their sole discretion and on behalf of all of the holders of shares of Series A Preferred Stock, for the Corporation to not pay all or any portion of the Series A Accruing Dividends upon ten (10) days' advance notice to the Board of Directors of the Corporation. If and to the extent that any portion of the Series A Accruing Dividends are not paid on a Dividend Payment Date by reason of such election or otherwise, such unpaid portion of the Series A Accruing Dividends shall accumulate and compound on the applicable Dividend Payment Date whether or not declared by the Board of Directors of the Corporation. All Series A Accruing Dividends on the shares of Series A Preferred Stock shall be prior to and in preference to any dividend on any shares of Common Stock or any other class or series of capital stock of the Corporation ranking junior to shares of Series A Preferred Stock in respect of payment of dividends and except as provided herein, shall be paid before any dividends are declared and paid, or any other distributions or redemptions are made, with respect to shares of Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock) or other classes or series of capital stock of the Corporation ranking junior to shares of Series A Preferred Stock in respect of payment of dividends.

1.9 Preferred Stock Dividends. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than as set forth in Section 1.1, Section 1.2, Section 1.3, Section 1.4, Section 1.5, Section 1.6, Section 1.6 or Section 1.7 or dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in this Restated Certificate) the holders of the Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Preferred Stock in an amount at least equal to (i) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Preferred Stock as would equal the product of (A) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (B) the number of shares of Common Stock issuable upon conversion of a share of Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (ii) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Preferred Stock determined by (A) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (B) multiplying such fraction by an amount equal to the Series A Original Issue Price, the Series B Original Issue Price, the Series B-1 Original Issue Price, the Series B-2 Original Issue Price, the Series C Original Issue Price, the Series D Original Issue Price, the Series E Original Issue Price, the Series F Original Issue Price, the Series G Original Issue Price, the Series G-2 Original Issue Price or the Series G-3 Original Issue Price, as the case may be; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Preferred Stock pursuant to this Section 1.9 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Preferred Stock dividend.

1.10 Original Issue Price. For purposes of this Restated Certificate, (i) the "***Series A Original Issue Price***" means $1.00 per share of Series A Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock after the filing date hereof, (ii) the "***Series B Original Issue Price***" means $1.8605 per share of Series B Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock after the filing date hereof, (iii) the "***Series B-1 Original Issue Price***" means $4.00 per share of Series B-1 Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B-1 Preferred Stock after the filing date hereof, (iv) the "***Series B-2 Original Issue Price***" means $7.1579 per share of Series B-2 Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B-2 Preferred Stock after the filing date hereof, (v) the "***Series C Original Issue Price***" means $7.1579 per share of Series C Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock after the filing date hereof, (vi) the "***Series D Original Issue Price***" means $9.3739 per share of Series D Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series D Preferred Stock after the filing date hereof, (vii) the "***Series E Original Issue Price***" means $16.7428 per share of Series E Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series E Preferred Stock after the filing date hereof, (viii) the "***Series F Original Issue Price***" means $24.7596 per share of Series F Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series F Preferred Stock after the filing date hereof, (ix) the "***Series G Original Issue Price***" means $38.3524 per share of Series G Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series G Preferred Stock after the filing date hereof, (x) the "***Series G-2 Original Issue Price***" means $57.3069 per share of Series G-2 Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series G-2 Preferred Stock after the filing date hereof, (xi) the "***Series G-3 Original Issue Price***" means $57.3069 per share of Series G-3 Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series G-3 Preferred Stock after the filing date hereof, and (xii) the "***Series G-4 Original Issue Price***" means $57.3069 per share of Series G-4 Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series G-4 Preferred Stock after the filing date hereof.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event (as defined below), the proceeds or assets of the Corporation available for distribution to stockholders shall be distributed as follows:

2.1 Preferential Payments to Holders of Series G-4 Preferred Stock. The holders of shares of Series G-4 Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) 1.0 times the Series G-4 Original Issue Price, plus any accrued but unpaid Series G-4 PIK Dividends, together with any other declared but unpaid dividends thereon, or (ii) such amount per share as would have been payable had all shares of Series G-4 Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series G-4 Preferred Stock is hereinafter referred to as the "***Series G-4 Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series G-4 Preferred Stock the full amount to which they shall be entitled under this Section 2.1, the holders of shares of Series G-4 Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Preferential Payments to Holders of Series G-3 Preferred Stock. After the payment of all preferential amounts required to be paid to the holders of Series G-3 Preferred Stock pursuant to Section 2.1, the holders of shares of Series G-3 Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) 1.0 times the Series G-3 Original Issue Price, plus any accrued but unpaid Series G-3 PIK Dividends, together with any other declared but unpaid dividends thereon, or (ii) such amount per share as would have been payable had all shares of Series G-3 Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series G-3 Preferred Stock is hereinafter referred to as the "***Series G-3 Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series G-3 Preferred Stock the full amount to which they shall be entitled under this Section 2.2, the holders of shares of Series G-3 Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.3 Preferential Payments to Holders of Series G-2 Preferred Stock. After the payment of all preferential amounts required to be paid to the holders of Series G-4 Preferred Stock and Series G-3 Preferred Stock pursuant to Sections 2.1 and 2.2, the holders of shares of Series G-2 Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) 1.0 times the Series G-2 Original Issue Price, plus any declared but unpaid dividends thereon, or (ii) such amount per share as would have been payable had all shares of Series G-2 Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series G-2 Preferred Stock is hereinafter referred to as the "***Series G-2 Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series G-2 Preferred Stock the full amount to which they shall be entitled under this Section 2.3, the holders of shares of Series G-2 Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.4 Preferential Payments to Holders of Series G Preferred Stock. After the payment of all preferential amounts required to be paid to the holders of Series G-3 Preferred Stock, Series G-3 Preferred Stock and Series G-2 Preferred Stock pursuant to Sections 2.1, 2.2, and 2.3, the holders of shares of Series G Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) 1.0 times the Series G Original Issue Price, plus any Series G Accruing Dividends accrued but unpaid thereon, together with any other dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series G Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series G Preferred Stock is hereinafter referred to as the "***Series G Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series G Preferred Stock the full amount to which they shall be entitled under this Section 2.4, the holders of shares of Series G Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.5 Preferential Payments to Holders of Series F Preferred Stock. After the payment of all preferential amounts required to be paid to the holders of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock and Series G Preferred Stock pursuant to Sections 2.1, 2.2, 2.3 and 2.4, the holders of shares of Series F Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) 1.0 times the Series F Original Issue Price, plus any Series F Accruing Dividends accrued but unpaid thereon, together with any other dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series F Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series F Preferred Stock is hereinafter referred to as the "***Series F Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series F Preferred Stock the full amount to which they shall be entitled under this Section 2.5, the holders of shares of Series F Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.6 Preferential Payments to Holders of Series E Preferred Stock. After the payment of all preferential amounts required to be paid to the holders of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock and Series F Preferred Stock pursuant to Sections 2.1, 2.2, 2.3, 2.4 and 2.5, the holders of shares of Series E Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) 1.0 times the Series E Original Issue Price, plus any Series E Accruing Dividends accrued but unpaid thereon, together with any other dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series E Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series E Preferred Stock is hereinafter referred to as the "***Series E Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series E Preferred Stock the full amount to which they shall be entitled under this Section 2.6, the holders of shares of Series E Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.7 Preferential Payments to Holders of Series D Preferred Stock. After the payment of all preferential amounts required to be paid to the holders of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock and Series E Preferred Stock pursuant to Sections 2.1, 2.2, 2.3, 2.4, 2.5 and 2.6, the holders of shares of Series D Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) 1.0 times the Series D Original Issue Price, plus any Series D Accruing Dividends accrued but unpaid thereon, together with any other dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series D Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series D Preferred Stock is hereinafter referred to as the "***Series D Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series D Preferred Stock the full amount to which they shall be entitled under this Section 2.7, the holders of shares of Series D Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.8 Preferential Payments to Holders of Series C Preferred Stock. After the payment of all preferential amounts required to be paid to the holders of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and Series D Preferred Stock pursuant to Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6 and 2.7, the holders of shares of Series C Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to 1.0 times the Series C Original Issue Price, plus any Series C Accruing Dividends accrued but unpaid thereon, together with any other dividends declared but unpaid thereon (the amount payable pursuant to this sentence with respect to the Series C Preferred Stock is hereinafter referred to as the "***Series C Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series C Preferred Stock the full amount to which they shall be entitled under this Section 2.8, the holders of shares of Series C Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.9 Preferential Payments to Holders of Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock. After the payment of all preferential amounts required to be paid to the holders of Series G-4 Preferred Stock, Series G-3 Preferred

Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock and Series C Preferred Stock pursuant to Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7 and 2.8, the holders of shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to (i) with respect to each share of Series B-2 Preferred Stock, the greater of (A) 1.0 times the Series B-2 Original Issue Price, plus any Series B-2 Accruing Dividends accrued but unpaid thereon, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series B-2 Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series B-2 Preferred Stock is hereinafter referred to as the "***Series B-2 Liquidation Amount***"), (ii) with respect to each share of Series B-1 Preferred Stock, the greater of (A) 1.0 times the Series B-1 Original Issue Price, plus any Series B-1 Accruing Dividends accrued but unpaid thereon, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series B-1 Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series B-1 Preferred Stock is hereinafter referred to as the "***Series B-1 Liquidation Amount***"), and (iii) with respect to Series B Preferred Stock, the greater of (A) 1.0 times the Series B Original Issue Price, plus any Series B Accruing Dividends accrued but unpaid thereon, together with any other dividends declared but unpaid thereon, or (B) such amount per share as would have been payable had all shares of Series B Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series B Preferred Stock is hereinafter referred to as the "***Series B Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock the full amount to which they shall be entitled under this Section 2.9, the holders of shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.10 Preferential Payments to Holders of Series A Preferred Stock. After the payment of all preferential amounts required to be paid to the holders of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock pursuant to Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8 and 2.9, the holders of shares of Series A Preferred Stock then outstanding shall be entitled to be paid out of the proceeds or assets of the Corporation available for distribution to its stockholders, before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) 1.0 times the Series A Original Issue Price, plus any Series A Accruing Dividends accrued but

unpaid thereon, together with any other dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series A Preferred Stock been converted into Voting Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence with respect to the Series A Preferred Stock is hereinafter referred to as the "***Series A Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the proceeds and assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series A Preferred Stock the full amount to which they shall be entitled under this Section 2.9, the holders of shares of Series A Preferred Stock shall share ratably in any distribution of the proceeds and assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.11 Distribution of Remaining Assets. After the payment of all preferential amounts required to be paid to the holders of Series G-4 Preferred Stock pursuant to Section 2.1, the payment of all preferential amounts required to be paid to the holders of Series G-3 Preferred Stock pursuant to Section 2.2, the payment of all preferential amounts required to be paid to the holders of Series G-2 Preferred Stock pursuant to Section 2.3, the payment of all preferential amounts required to be paid to the holders of Series G Preferred Stock pursuant to Section 2.4, the payment of all preferential amounts required to be paid to the holders of Series F Preferred Stock pursuant to Section 2.5, the payment of all preferential amounts required to be paid to the holders of Series E Preferred Stock pursuant to Section 2.6, the payment of all preferential amounts required to be paid to the holders of Series D Preferred Stock pursuant to Section 2.7, the payment of all preferential amounts required to be paid to the holders of Series C Preferred Stock pursuant to Section 2.8, the payment of all preferential amounts required to be paid to the holders of Series B-2 Preferred Stock, Series B-1 Preferred Stock and Series B Preferred Stock pursuant to Section 2.9, and the payment of all preferential amounts required to be paid to the holders of Series A Preferred Stock pursuant to Section 2.10, the remaining assets of the Corporation available for distribution to its stockholders, if any, shall be distributed among the holders of shares of Series C Preferred Stock and Common Stock, *pro rata* based on the number of shares then held by each such holder, treating for this purpose all such shares of Series C Preferred Stock as if they had been converted into Common Stock pursuant to this Restated Certificate immediately prior to such Liquidation Event or Deemed Liquidation Event; provided, however, that if the aggregate amount which the holders of Series D Preferred Stock would otherwise be entitled to receive is less than $18.7478 per share (as adjusted for any stock splits, stock dividends, combinations, subdivisions, recapitalizations or the like), then the remaining assets of the Corporation available for distribution to its stockholders, if any, shall be distributed among the holders of shares of Series C Preferred Stock (excluding, for this purpose, any shares of Series C Preferred Stock held at any time by Eric P. Lefkofsky or any entity in which Eric P. Lefkofsky owned or held, directly or indirectly, the power to direct the management and policies of such entity whether through the ownership of voting securities, contract or otherwise ("***Lefkofsky Shares***"), regardless of whether or not any of the Lefkofsky Shares were subsequently transferred and regardless of the subsequent holders of the Lefkofsky Shares) and Common Stock, *pro rata* based on the number of shares then held by each such holder, treating for this purpose all such shares of Series C Preferred Stock as if they had been converted into Common Stock pursuant to this Restated Certificate immediately prior to such Liquidation Event or Deemed Liquidation Event.

2.12 Deemed Liquidation Events.

2.12.1 Definition. Each of the following events shall be considered a "***Deemed Liquidation Event***" unless the Requisite Preferred Holders (as defined below) elect otherwise by written notice sent to the Corporation at least 10 days prior to the effective date of any such event:

(a) a merger or consolidation in which the Corporation is a constituent party (or a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation) or (ii) a sale or issuance of shares by the Corporation of its voting stock (other than pursuant to a customary venture capital financing of the Corporation where the holder(s) of shares of capital stock of the Corporation outstanding immediately prior to such venture capital financing continue to hold shares which represent, immediately following such venture capital financing, at least a majority, by voting power, of the outstanding shares of capital stock), except in the case of clause (i) or (ii), any such merger or consolidation involving the Corporation or a subsidiary or any such sale or issuance by the Corporation in which the holder(s) of shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to hold shares which represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the outstanding shares of capital stock of (1) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation, in substantially the same proportions and with substantially the same terms as held immediately prior to such merger or consolidation; or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets or intellectual property of the Corporation and its subsidiaries taken as a whole or the sale or disposition (whether by merger or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets or intellectual property of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

(c) Notwithstanding the foregoing Subsections 2.12.1(a) and 2.12.1(b), (i) no such transaction or series of related transactions (including by way of merger, consolidation, recapitalization, reorganization, sale of securities or otherwise) solely effecting a "Public Offering" shall be deemed a Deemed Liquidation Event, and (ii) a Deemed Liquidation Event shall not include any such transaction effected solely by the issuance of voting securities by the Corporation or any of its Subsidiaries in a bona fide transaction for the purpose of raising capital for the Corporation or its Subsidiary where the holder(s) of shares of capital stock of the Corporation outstanding immediately prior to such transaction continue to hold shares which represent, immediately following such transaction, at least a majority, by voting power, of the

outstanding shares of capital stock. "***Public Offering***" means any firm commitment underwritten sale of common equity securities of the Corporation (or any successor thereto, whether by merger, conversion, consolidation, recapitalization, reorganization or otherwise) pursuant to an effective registration statement under the "***Securities Act***" (defined as Securities Act of 1933, as amended, and applicable rules and regulations thereunder, and any successor to such statute, rules, or regulations; any reference herein to a specific section, rule, or regulation of the Securities Act shall be deemed to include any corresponding provisions of future law) filed with the Securities and Exchange Commission on Forms S-1 or S-3 (or any successor forms adopted by the Securities and Exchange Commission); provided, that the following shall not be considered a Public Offering: (i) any issuance of common equity securities in connection with and as consideration for a merger or acquisition, and (ii) any issuance of common equity securities or rights to acquire common equity securities to employees, officers, directors, consultants or other service providers of the Corporation or any of its Subsidiaries or others as part of an incentive or compensation plan, agreement or arrangement.

For the avoidance of doubt, nothing contained in this Section 2.12.1 or elsewhere in this Restated Certificate (other than the terms and conditions of Sections 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10 or 3.11, if applicable) shall require the consent or approval of holders of the outstanding shares of Series G-4 Preferred Stock, voting as a separate class, Series G-3 Preferred Stock, voting as a separate class, Series G-2 Preferred Stock, voting as a separate class, Series G Preferred Stock, voting as a separate class, Series F Preferred Stock, voting as a separate class, Series E Preferred Stock, voting as a separate class, shares of Series D Preferred Stock, voting as a separate class, or shares of Series C Preferred Stock, voting as a separate class, to effect a Deemed Liquidation Event.

2.12.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Section 2.12.1(a) unless the agreement or plan of merger or consolidation for such transaction (the "***Merger Agreement***") provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 and 2.11.

(b) In the event of a Deemed Liquidation Event referred to in Section 2.12.1(a) or 2.12.1(b), if the Corporation does not effect a dissolution of the Corporation under the DGCL within 90 days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock no later than the 90th day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause (ii), and (ii) unless (A) the holders of a majority of the outstanding shares of Series G-4 Preferred Stock, voting as a separate class, (B) the holders of a majority of the outstanding shares of Series G-3 Preferred Stock, voting as a separate class, (C) the holders of a majority of the outstanding shares of Series G-2 Preferred Stock, voting as a separate class, (D) the holders of a majority of the outstanding shares of Series G Preferred Stock, voting as a separate class, (E) the holders of a majority of the outstanding shares of Series F Preferred Stock, voting as a separate class, (F) the holders of a majority of the outstanding shares of Series E Preferred Stock, voting as a separate class, (G) the holders of at

least sixty percent (60%) of the outstanding shares of Series D Preferred Stock, voting as a separate class, (H) the holders of at least sixty percent (60%) of the outstanding shares of Series C Preferred Stock, voting as a separate class, and (I) the holders of a majority of the outstanding shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock and Series A Preferred Stock, voting together as a separate class as measured on the basis of voting power set forth in this Restated Certificate, so request otherwise in a written instrument delivered to the Corporation not later than 120 days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board)**,** together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "***Available Proceeds***"), on the 150th day after such Deemed Liquidation Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the Series G-4 Liquidation Amount, Series G-3 Liquidation Amount, Series G-2 Liquidation Amount, Series G Liquidation Amount, Series F Liquidation Amount, Series E Liquidation Amount, Series D Liquidation Amount, Series C Liquidation Amount, Series B-2 Liquidation Amount, Series B-1 Liquidation Amount, Series B Liquidation Amount or Series A Liquidation Amount, as applicable. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock, the Corporation shall redeem each holder's shares of Preferred Stock in the same order of priority as the payment of the Series G-4 Liquidation Amount, Series G-3 Liquidation Amount, Series G-2 Liquidation Amount, Series G Liquidation Amount, Series F Liquidation Amount, Series E Liquidation Amount, Series D Liquidation Amount, Series C Liquidation Amount, Series B-2 Liquidation Amount, Series B-1 Liquidation Amount, Series B Liquidation Amount or Series A Liquidation Amount pursuant to Section 2, and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders. The provisions of Sections 2.12.2(c), 2.12.2(d) and 2.12.2(e) shall apply to the redemption of the Preferred Stock pursuant to this Section 2.12.2(b). Prior to the distribution or redemption provided for in this Section 2.12.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business. For the avoidance of doubt, to the extent any additional Available Proceeds related to such Deemed Liquidation Event become available for distribution to the Corporation's stockholders pursuant to Delaware law after the date of redemption of the Preferred Stock, such amounts shall be allocated among the holders of such Preferred Stock and Common Stock in accordance with Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 and 2.11 as if the redemption had not occurred, and the price per share of the Preferred Stock shall be increased to an amount equal to the price per share that would have been paid to such holders if such additional Available Proceeds were available for distribution to stockholders of the Corporation as of the date of the redemption of such shares of Preferred Stock (the "***Additional Redemption Price***"). The Corporation shall promptly pay any Additional Redemption Price to the former holders of Preferred Stock as such amounts become available for distribution to the Corporation's stockholders pursuant to Delaware law.

(c) To effect the redemption contemplated by Section 2.12.2(b), the Corporation shall send written notice of the mandatory redemption (the "***Redemption Notice***") to each holder of record of Preferred Stock not less than 40 days prior to such redemption date. Each Redemption Notice shall state:

(i) the number of shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock and Series A Preferred Stock held by the holder that the Corporation shall redeem on the redemption date specified in the Redemption Notice;

(ii) the redemption date and the redemption price;

(iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Section 4.1); and

(iv) that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the 20th day after the date of delivery of the Redemption Notice to a holder of Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption of the Preferred Stock provided in this Section 2.12.2, then the shares of Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "***Excluded Shares***." Excluded Shares shall not be redeemed or redeemable pursuant to this Section 2.12.2, whether on such redemption date or thereafter.

(d) On or before the applicable redemption date, each holder of shares of Preferred Stock to be redeemed on such redemption date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the redemption price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of Preferred Stock represented by a certificate are redeemed, a new certificate representing the unredeemed shares of Preferred Stock shall promptly be issued to such holder.

(e) If the Redemption Notice shall have been duly given, and if on the applicable redemption date the redemption price payable upon redemption of the shares of Preferred Stock to be redeemed on such redemption date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of Preferred Stock so called for redemption shall not have been surrendered, dividends with respect to such shares of Preferred Stock shall cease to accrue after such redemption date and all rights with respect to such shares shall forthwith after the redemption date terminate, except only the right of the holders to receive the redemption price (including the Additional Redemption Price from time to time, if any) without interest upon surrender of their certificate or certificates therefor.

2.12.3 Amount Deemed Paid or Distributed. If the amount deemed paid or distributed in a Deemed Liquidation Event under Section 2 is made in property other than in cash, the fair market value of such property, determined as follows:

(a) For securities not subject to investment letters or other similar restrictions on free marketability,

(i) if traded on a securities exchange, the value shall be deemed to be the average of the closing prices of the securities on such exchange or market over the 30-period ending three days prior to the closing of such transaction;

(ii) if actively traded over-the-counter, the value shall be deemed to be the average of the closing bid prices over the 30-day period ending three days prior to the closing of such transaction; or

(iii) if there is no active public market, the value shall be the fair market value thereof, as determined in good faith by the Board.

(b) The method of valuation of securities subject to investment letters or other similar restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall take into account an appropriate discount (as determined in good faith by the Board) from the market value as determined pursuant to clause (a) above so as to reflect the approximate fair market value thereof.

2.13 Contingent Consideration and Indemnification. In the event of a Deemed Liquidation Event, unless (A) the holders of a majority of the outstanding shares of Series G-4 Preferred Stock, voting as a separate class, (B) the holders of a majority of the outstanding shares of Series G-3 Preferred Stock, voting as a separate class, (C) the holders of a majority of the outstanding shares of Series G-2 Preferred Stock, voting as a separate class, (D) the holders of a majority of the outstanding shares of Series G Preferred Stock, voting as a separate class, (E) the holders of a majority of the outstanding shares of Series F Preferred Stock, voting as a separate class, (F) the holders of a majority of the outstanding shares of Series E Preferred Stock, voting as a separate class, (G) the holders of at least sixty percent (60%) of the outstanding shares of Series D Preferred Stock, voting as a separate class, (H) the holders of at least sixty percent (60%) of the outstanding shares of Series C Preferred Stock, voting as a separate class, and (I) the holders of a majority of the outstanding shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock and Series A Preferred Stock, voting together as a single class as measured on the basis of voting power set forth in this Restated Certificate (the holders described in clauses (A), (B), (C), (D), (E), (F), (G), (H) and (I) referred to herein, collectively, as the "***Requisite Preferred Holders***"), otherwise approve in writing, if any portion of the consideration payable to the stockholders of the Corporation in connection with a Deemed Liquidation Event is payable only upon the satisfaction of contingencies or is placed in escrow, a "holdback" or other similar account to secure the indemnity obligations of the stockholders (such consideration, the "***Additional Consideration***"), the definitive agreement with respect to such Deemed Liquidation Event shall provide that (a) the portion of the consideration that is not Additional Consideration (the "***Initial Consideration***") shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 and 2.11

hereof as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event, and (b) any Additional Consideration which becomes payable or distributable to the stockholders of the Corporation after the initial closing of such Deemed Liquidation Event shall be allocated among the holders of capital stock of the Corporation in strict accordance with Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 and 2.11 hereof after taking into account any previous payments of the Initial Consideration made to the stockholders of the Corporation pursuant to Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 and 2.11 hereof. In connection with the payment of such Additional Consideration, if the Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock or Series A Preferred Stock did not convert to Common Stock immediately before the initial closing of the Deemed Liquidation Event and if the Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock or Series A Preferred Stock had converted to Common Stock immediately before the initial closing of the Deemed Liquidation Event and the Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock or Series A Preferred Stock would have received greater total consideration from the Deemed Liquidation Event after the payments of the Additional Consideration are made, then the Additional Consideration shall be paid to the holders of the Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock or Common Stock pursuant to Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 and 2.11 hereof taking into account such deemed conversion, as applicable, and after taking into account any previous payments of the Initial Consideration made to the holders of Preferred Stock pursuant to Sections 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 and 2.11 hereof.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), (a) each holder of outstanding shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B-2 Preferred Stock, Series B-1 Preferred Stock, and Series A Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Class A Common Stock into which such shares of Preferred Stock held by such holder are convertible, based on the then-current Conversion Price (as defined below) for such shares, as of the record date for determining stockholders entitled to vote on such matter, and (b) each holder of outstanding shares of Series B Preferred Stock shall be entitled to cast the number of votes equal to the voting power of the number of whole shares of Class B Common Stock into which the shares of Series B Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by applicable law or

by the other provisions of this Restated Certificate, holders of Preferred Stock shall vote together with the holders of Voting Common Stock as a single class on all matters (including the election of directors) submitted to a vote of the stockholders of the Corporation.

3.2 Election of Directors.

3.2.1 The holders of record of the shares of Series C Preferred Stock, voting as a separate class, shall be entitled to elect one (1) director of the Corporation. The holders of record of the shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock and Voting Common Stock, voting together as a single class as measured on the basis of voting power set forth in this Restated Certificate, shall be entitled to elect six (6) directors of the Corporation. The holders of record of the shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock, Series A Preferred Stock and Voting Common Stock, voting together as a single class as measured on the basis of voting power set forth in this Restated Certificate, shall be entitled to elect two (2) directors of the Corporation who are not employed by the Corporation. The holders of record of the shares of Voting Common Stock and Preferred Stock (voting together as a single class as measured on the basis of voting power set forth in this Restated Certificate) shall be entitled to elect each of the remaining directors of the Corporation. Vacancies and newly created positions on the Board of Directors of the Corporation resulting from any increase in the authorized number of Directors may be filled by approval by the holders of at least a majority of the shares of Voting Common Stock.

3.2.2 Any director elected as provided in Section 3.2.1 may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of capital stock fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to this Section 3.2, then any directorship not so filled shall remain vacant until such time as the holders entitled to such director elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class and series. At any meeting held for the purpose of electing or removing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Section 3.2, a vacancy in any directorship filled by the holders of such class or series shall be filled only by the vote or written consent in lieu of a meeting of the holders of such class or series entitled to elect such director.

3.3 Series G-4 Preferred Stock Protective Provisions. So long as any shares of Series G-4 Preferred Stock remain outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Restated Certificate) the written consent or affirmative vote of the holders of a majority of the then-outstanding shares of Series G-4 Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) as a single

class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.3.1 amend, alter or repeal any provision of the Certificate of Incorporation, as amended, or the Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G-4 Preferred Stock or the holders thereof with respect to the ownership thereof (provided, that for the avoidance of doubt, the creation, authorization or issuance of any shares of Preferred Stock with rights senior to or *pari passu* with the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G-4 Preferred Stock shall not be deemed to constitute an amendment that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G-4 Preferred Stock); or

3.3.2 increase the authorized number of shares of Series G-4 Preferred Stock or issue additional shares of Series G-4 Preferred Stock (or any securities or rights exercisable, convertible or exchangeable for any shares of Series G-4 Preferred Stock) (provided, that for the avoidance of doubt, the Corporation may create, authorize or issue (i) shares of Series G-4 Preferred Stock in order to pay any Series G-4 PIK Dividends, and (ii) any shares of Preferred Stock except the Series G-4 Preferred Stock other than the Series G-4 PIK Dividends).

3.4 Series G-3 Preferred Stock Protective Provisions. So long as any shares of Series G-3 Preferred Stock remain outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Restated Certificate) the written consent or affirmative vote of the holders of a majority of the then-outstanding shares of Series G-3 Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) as a single class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.4.1 amend, alter or repeal any provision of the Certificate of Incorporation, as amended, or the Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G-3 Preferred Stock or the holders thereof with respect to the ownership thereof (provided, that for the avoidance of doubt, the creation, authorization or issuance of any shares of Preferred Stock with rights senior to or *pari passu* with the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G-3 Preferred Stock shall not be deemed to constitute an amendment that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G-3 Preferred Stock); or

3.4.2 increase the authorized number of shares of Series G-3 Preferred Stock or issue additional shares of Series G-3 Preferred Stock (or any securities or rights exercisable, convertible or exchangeable for any shares of Series G-3 Preferred Stock) (provided, that for the avoidance of doubt, the Corporation may create, authorize or issue (i) shares of Series G-3 Preferred Stock in order to pay any Series G-3 PIK Dividends, and (ii) any shares of Preferred Stock except the Series G-3 Preferred Stock other than the Series G-3 PIK Dividends).

3.5 Series G-2 Preferred Stock Protective Provisions. So long as any shares of Series G-2 Preferred Stock remain outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Restated Certificate) the written consent or affirmative vote of the holders of a majority of the then-outstanding shares of Series G-2 Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) as a single class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.5.1 amend, alter or repeal any provision of the Certificate of Incorporation, as amended, or the Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G-2 Preferred Stock or the holders thereof with respect to the ownership thereof (provided, that for the avoidance of doubt, the creation, authorization or issuance of any shares of Preferred Stock with rights senior to or *pari passu* with the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G-2 Preferred Stock shall not be deemed to constitute an amendment that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G-2 Preferred Stock); or

3.5.2 increase the authorized number of shares of Series G-2 Preferred Stock or issue additional shares of Series G-2 Preferred Stock (or any securities or rights exercisable, convertible or exchangeable for any shares of Series G-2 Preferred Stock) (provided, that for the avoidance of doubt, the Corporation may create, authorize or issue any shares of Preferred Stock except the Series G-2 Preferred Stock).

3.6 Series G Preferred Stock Protective Provisions. So long as any shares of Series G Preferred Stock remain outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Restated Certificate) the written consent or affirmative vote of the holders of a majority of the then-outstanding shares of Series G Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) as a single class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.6.1 amend, alter or repeal any provision of the Certificate of Incorporation, as amended, or the Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G Preferred Stock or the holders thereof with respect to the ownership thereof (provided, that for the avoidance of doubt, the creation, authorization or issuance of any shares of Preferred Stock with rights senior to or *pari passu* with the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G Preferred Stock shall not be deemed to constitute an amendment that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series G Preferred Stock); or

3.6.2 increase the authorized number of shares of Series G Preferred Stock or issue additional shares of Series G Preferred Stock (or any securities or rights exercisable, convertible or exchangeable for any shares of Series G Preferred Stock) (provided, that for the avoidance of doubt, the Corporation may create, authorize or issue any shares of Preferred Stock except the Series G Preferred Stock).

3.7 Series F Preferred Stock Protective Provisions. So long as any shares of Series F Preferred Stock remain outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Restated Certificate) the written consent or affirmative vote of the holders of a majority of the then-outstanding shares of Series F Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) as a single class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.7.1 amend, alter or repeal any provision of the Certificate of Incorporation, as amended, or the Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series F Preferred Stock or the holders thereof with respect to the ownership thereof (provided, that for the avoidance of doubt, the creation, authorization or issuance of any shares of Preferred Stock with rights senior to or *pari passu* with the rights, preferences, privileges and restrictions, qualifications or limitations of the Series F Preferred Stock shall not be deemed to constitute an amendment that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series F Preferred Stock); or

3.7.2 increase the authorized number of shares of Series F Preferred Stock or issue additional shares of Series F Preferred Stock (or any securities or rights exercisable, convertible or exchangeable for any shares of Series F Preferred Stock) (provided, that for the avoidance of doubt, the Corporation may create, authorize or issue any shares of Preferred Stock except the Series F Preferred Stock).

3.8 Series E Preferred Stock Protective Provisions. So long as any shares of Series E Preferred Stock remain outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Restated Certificate) the written consent or affirmative vote of the holders of a majority of the then-outstanding shares of Series E Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) as a single class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.8.1 amend, alter or repeal any provision of the Certificate of Incorporation, as amended, or the Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series E Preferred Stock or the holders thereof with respect to the ownership thereof (provided, that for the avoidance of doubt, the creation, authorization or issuance of any shares of Preferred Stock with rights senior to or *pari passu* with the rights, preferences, privileges and restrictions, qualifications or limitations of the Series E Preferred Stock shall not be deemed to constitute an amendment that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series E Preferred Stock); or

3.8.2 increase the authorized number of shares of Series E Preferred Stock or issue additional shares of Series E Preferred Stock (or any securities or rights exercisable, convertible or exchangeable for any shares of Series E Preferred Stock) (provided, that for the avoidance of doubt, the Corporation may create, authorize or issue any shares of Preferred Stock except the Series E Preferred Stock).

3.9 Series D Preferred Stock Protective Provisions. So long as any shares of Series D Preferred Stock remain outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Restated Certificate) the written consent or affirmative vote of the holders of at least sixty percent (60%) of the then-outstanding shares of Series D Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) as a single class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.9.1 amend, alter or repeal any provision of the Certificate of Incorporation, as amended, or the Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series D Preferred Stock or the holders thereof with respect to the ownership thereof (provided, that for the avoidance of doubt, the creation, authorization or issuance of any shares of Preferred Stock with rights senior to or *pari passu* with the rights, preferences, privileges and restrictions, qualifications or limitations of the Series D Preferred Stock shall not be deemed to constitute an amendment that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series D Preferred Stock);

3.9.2 increase the authorized number of shares of Series D Preferred Stock or issue additional shares of Series D Preferred Stock (or any securities or rights exercisable, convertible or exchangeable for any shares of Series D Preferred Stock) (provided, that for the avoidance of doubt, the Corporation may create, authorize or issue any shares of Preferred Stock except the Series D Preferred Stock); or

3.9.3 approve or enter into any agreement with respect to a Deemed Liquidation Event, or consummate a Deemed Liquidation Event, in which the per share amount paid with respect to each share of Series D Preferred Stock is less than $9.3739 (as adjusted for any stock splits, stock dividends, combinations, subdivisions, recapitalizations or the like).

3.10 Series C Preferred Stock Protective Provisions. So long as any shares of Series C Preferred Stock remain outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Restated Certificate) the written consent or affirmative vote of the holders of at least sixty percent (60%) of the then-outstanding shares of Series C Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) as a single class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.10.1 amend, alter or repeal any provision of the Certificate of Incorporation, as amended, or the Bylaws of the Corporation in a manner that adversely affects

the rights, preferences, privileges and restrictions, qualifications or limitations of the Series C Preferred Stock or the holders thereof with respect to the ownership thereof (provided, that for the avoidance of doubt, the creation, authorization or issuance of any shares of Preferred Stock with rights senior to or *pari passu* with the rights, preferences, privileges and restrictions, qualifications or limitations of the Series C Preferred Stock shall not be deemed to constitute an amendment that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series C Preferred Stock); or

3.10.2 increase the authorized number of shares of Series C Preferred Stock or issue additional shares of Series C Preferred Stock (or any securities or rights exercisable, convertible or exchangeable for any shares of Series C Preferred Stock) (provided, that for the avoidance of doubt, the Corporation may create, authorize or issue any shares of Preferred Stock except the Series C Preferred Stock).

3.11 Other Preferred Stock Protective Provisions. So long as any shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock and Series A Preferred Stock remain outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Restated Certificate) the written consent or affirmative vote of the holders of at least a majority of the then-outstanding shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock and Series A Preferred Stock given in writing or by vote at a meeting, consenting or voting (as the case may be) together as a single class as measured on the basis of voting power set forth in this Restated Certificate, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.11.1 amend, alter or repeal any provision of the Certificate of Incorporation, as amended, or the Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock and Series A Preferred Stock or the holders thereof with respect to the ownership thereof (provided, that for the avoidance of doubt, the creation, authorization or issuance of any shares of Preferred Stock with rights senior to or *pari passu* with the rights, preferences, privileges and restrictions, qualifications or limitations of the Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock or Series A Preferred Stock shall not be deemed to constitute an amendment that adversely affects the rights, preferences, privileges and restrictions, qualifications or limitations of the Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock and Series A Preferred Stock; or

3.11.2 increase the authorized number of shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock or Series A Preferred Stock or issue additional shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock or Series A Preferred Stock (or any securities or rights exercisable, convertible or exchangeable for any shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock or Series A Preferred Stock) (provided, that for the avoidance of doubt, the Corporation may create, authorize or issue any shares of Preferred Stock except the Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock or Series A Preferred Stock).

4. Optional Conversion. The holders of the Preferred Stock shall have conversion rights as follows (the "***Conversion Rights***"):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Preferred Stock (other than the Series B Preferred Stock) shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Class A Common Stock as is determined by dividing the Original Issue Price for such series of Preferred Stock by the Conversion Price (as defined below) for such series of Preferred Stock in effect at the time of conversion. Each share of Series B Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Class B Common Stock as is determined by dividing the Original Issue Price for the Series B Preferred Stock by the Conversion Price (as defined below) for the Series B Preferred Stock in effect at the time of conversion. The shares of Class A Common Stock or Class B Common Stock, as applicable, into which shares of Preferred Stock are convertible are referred to herein as the "***Conversion Stock***." The "***Conversion Price***" for each series of Preferred Stock shall initially mean the Original Issue Price for such series of Preferred Stock as in effect on the filing date hereof. Such initial Conversion Price and the rate at which shares of Preferred Stock may be converted into shares of Conversion Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a notice of redemption of any shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock or Series D Preferred Stock pursuant to Section 6, the Conversion Rights of the shares designated for redemption shall terminate at the close of business on the last full day preceding the date fixed for redemption, unless the applicable redemption price is not fully paid on such redemption date, in which case the Conversion Rights for such shares shall continue until such price is paid in full. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Conversion Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock, as determined in good faith by the Board. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into shares of Conversion Stock and the aggregate number of shares of Conversion Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Conversion Stock, such holder shall surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Conversion Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the "***Conversion Time***"), and the shares of Conversion Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Conversion Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Conversion Stock, (ii) pay in cash such amount as provided in Section 4.2 in lieu of any fraction of a share of Conversion Stock otherwise issuable upon such conversion, and (iii) pay all declared or accrued but unpaid dividends on the shares of Preferred Stock converted (including, without limitation, all accrued but unpaid Series G-4 PIK Dividends, Series G-3 PIK Dividends, Series G Accruing Dividends, Series F Accruing Dividends, Series E Accruing Dividends, Series D Accruing Dividends, Series C Accruing Dividends, Series B-2 Accruing Dividends, Series B-1 Accruing Dividends, Series B Accruing Dividends or Series A Accruing Dividends, as applicable).

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Voting Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock, including the conversion of shares of Series G-4 Preferred Stock issuable as Series G-4 PIK Dividends and shares of Series G-3 Preferred Stock issuable as Series G-3 PIK Dividends; and if at any time the number of authorized but unissued shares of Voting Common Stock shall not be sufficient to effect the conversion of all then-outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Voting Common Stock, as the case may be, to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder

approval of any necessary amendment to this Restated Certificate. Before taking any action which would cause an adjustment reducing the Conversion Price below the then par value of the shares of Voting Common Stock issuable upon conversion of the Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Voting Common Stock at such adjusted Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Conversion Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Section 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Conversion Price shall be made for any declared or accrued but unpaid dividends on the Preferred Stock surrendered for conversion or on the Conversion Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Conversion Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Conversion Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Seventh, the following definitions shall apply:

(a) "***Option***" means rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "***Original Issue Date***" for a series of Preferred Stock means the date on which the first share of such series of Preferred Stock was issued.

(c) "***Convertible Securities***" means any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "***Additional Shares of Common Stock***" means all shares of Common Stock issued (or, pursuant to Section 4.4.3 below, deemed to be issued) by the Corporation after the Original Issue Date of the Series G-4 Preferred Stock, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "***Exempted Securities***"):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Preferred Stock, including without limitation, the Series G-4 PIK Dividends and the Series G-3 PIK Dividends;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Section 4.6, 4.7, 4.8 or 4.9;

(iii) shares of Common Stock, Options or Convertible Securities issued upon the conversion or exercise of Options, Convertible Securities or other rights to acquire securities of the Corporation;

(iv) shares of Nonvoting Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to an equity incentive plan, agreement or arrangement approved by the Board;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board;

(vi) shares of Common Stock, Options or Convertible Securities issued to suppliers or third-party service-providers in connection with the provision of goods or services pursuant to transactions approved by the Board;

(vii) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided, that such issuances are approved by the Board;

(viii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research collaboration, technology license, development, OEM, marketing or other similar agreements or strategic partnerships approved by the Board;

(ix) shares of Common Stock, Options or Convertible Securities issued in connection with a Deemed Liquidation Event; or

(x) shares of Common Stock sold to the public in a Public Offering (as defined in Section 5.1.1) or Qualifying Public Offering (as defined in Section 5.1.2).

4.4.2 No Adjustment of Conversion Price. No adjustment (A) in the Series A Conversion Price, Series B Conversion Price, Series B-1 Conversion Price, or Series B-2 Conversion Price, as the case may be, shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the then outstanding shares of Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock and Series B-2 Preferred Stock, voting together as a single class as measured on the basis of voting power set forth in this Restated Certificate, (B) in the Series C Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least sixty percent (60%) of the then outstanding shares of Series C Preferred Stock, (C) in the Series D Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least sixty percent (60%) of the then outstanding shares of Series D Preferred Stock, (D) in the Series E Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the then outstanding shares of Series E Preferred Stock, (E) in the Series F Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the then outstanding shares of Series F Preferred Stock, (F) in the Series G Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the then outstanding shares of Series G Preferred Stock, (G) in the Series G-2 Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the then outstanding shares of Series G-2 Preferred Stock, (H) in the Series G-3 Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the then outstanding shares of Series G-3 Preferred Stock, and (I) in the Series G-4 Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of a majority of the then outstanding shares of Series G-4 Preferred Stock, respectively, agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock, which election may be applied prospectively or retroactively and either generally or in a particular instance.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Original Issue Date of the Series G-4 Preferred Stock shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any

conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Conversion Price pursuant to the terms of Section 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the applicable Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing a Conversion Price to an amount which exceeds the lower of (i) the applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the applicable Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the applicable Conversion Price pursuant to the terms of Section 4.4.4 (either because the consideration per share (determined pursuant to Section 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the applicable Conversion Price then in effect, or because such Option or Convertible Security was issued before the Original Issue Date of the Series G-4 Preferred Stock), are revised after the Original Issue Date of the Series G-4 Preferred Stock as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Section 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to a Conversion Price pursuant to the terms of Section 4.4.4, the applicable Conversion Price shall be readjusted to such Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the applicable Conversion Price provided for in this Section 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Section 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the applicable Conversion Price that would result under the terms of this Section 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the applicable Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Original Issue Date of the Series G-4 Preferred Stock issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Section 4.4.3), without consideration or for a consideration per share less than the applicable Conversion Price in effect immediately prior to such issue, then such Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "***CP_2***" shall mean the applicable Conversion Price in effect immediately after such issue of Additional Shares of Common Stock;

(b) "***CP_1***" shall mean the applicable Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "***A***" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options

outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "***B***" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) "***C***" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Section 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Section 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the

conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.5 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the applicable Conversion Price pursuant to the terms of Subsection 4.4.4, then, upon the final such issuance, the applicable Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.6 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Original Issue Date of the Series G-4 Preferred Stock effect a subdivision of the outstanding Voting Common Stock, the applicable Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Voting Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Voting Common Stock outstanding. If the Corporation shall at any time or from time to time after the Original Issue Date of the Series G-4 Preferred Stock combine the outstanding shares of Voting Common Stock, the applicable Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Voting Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Voting Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective. The Corporation shall not effect a subdivision or combination of the outstanding Voting Common Stock or Nonvoting Common Stock, as the case may be, without effecting the same subdivision or combination of the outstanding Nonvoting Common Stock or Voting Common Stock, respectively.

4.7 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Original Issue Date of the Series G-4 Preferred Stock shall make or issue, or fix a record date for the determination of holders of Voting Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Voting Common Stock, then and in each such event the applicable Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the applicable Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Voting Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Voting Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing, (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the applicable Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the applicable Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions, and (b) that no such adjustment shall be made if the holders of Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Voting Common Stock as they would have received if all outstanding shares of Preferred Stock had been converted into Voting Common Stock on the date of such event. The Corporation shall not make or issue, or fix a record date for the determination of holders of Voting Common Stock or Nonvoting Common Stock, as the case may be, a dividend or other distribution payable on the Voting Common Stock or Nonvoting Common Stock, respectively, in additional shares of Common Stock, without making or issuing, or fixing a record date for the determination of the holders of Nonvoting Common Stock or Voting Common Stock, respectively, a dividend or other distribution payable on the Nonvoting Common Stock or Voting Common Stock, respectively, in the same number of additional shares of Common Stock per share of Nonvoting Common Stock or Voting Common Stock, respectively, as payable per share of Voting Common Stock or Nonvoting Common Stock, respectively.

4.8 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Original Issue Date of the Series G-4 Preferred Stock shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Voting Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Voting Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Voting Common Stock on the date of such event. The Corporation shall not make or issue, or fix a record date for the determination of holders of Voting Common Stock or Nonvoting Common Stock, as the case may be, a dividend or other distribution payable on the Voting Common Stock or Nonvoting Common Stock, respectively, in securities of the Corporation or other property, without making or issuing, or fixing a record date for the determination of the holders of Nonvoting Common Stock or Voting Common Stock, respectively, a dividend or other distribution payable on the Nonvoting Common Stock or Voting Common Stock, respectively, in the same number of securities of the Corporation or other property per share of Nonvoting Common Stock or Voting Common Stock, respectively, as payable per share of Voting Common Stock or Nonvoting Common Stock, respectively.

4.9 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Section 2.12, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Voting Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Sections 4.4, 4.7 or 4.8), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Preferred Stock shall thereafter be convertible in lieu of the Voting Common Stock into which it was convertible prior

to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Voting Common Stock of the Corporation issuable upon conversion of one share of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.10 Special IPO Adjustment to Conversion Price of Series G-4 Preferred Stock. In the event of a Public Offering or Qualifying Public Offering, the Conversion Price of the Series G-4 Preferred Stock then in effect shall be adjusted downward to an amount equal to the lesser of (i) the product of (x) the price per share of Class A Common Stock sold in such Public Offering or Qualifying Public Offering and (y) 85%, and (ii) $51.5762 (as adjusted (1) for any stock dividends, combinations, splits, recapitalizations or the like and/or (2) in an appropriate manner pursuant to Section 4.4.4 above as if such amount were the Conversion Price of the Series G-4 Preferred Stock). The downward adjustment of the Conversion Price of the Series G-4 Preferred Stock, if any, pursuant to this Section 4.10 shall occur effective as of immediately prior to any conversion of the Series G-4 Preferred Stock into Class A Common Stock in connection with a Public Offering or Qualifying Public Offering (or, in the event that no such conversion occurs, effective as of immediately prior to the closing of such public offering), and for the avoidance of doubt, shall be reflected in the number of shares of Class A Common Stock into which each share of Series G-4 Preferred Stock are converted in connection with such public offering, including, without limitation, a conversion pursuant to Section 5.1.1(a). Notwithstanding the foregoing, the Conversion Price of Series G-4 Preferred Stock shall not be reduced at such time if the amount of such reduction would be less than $0.01.

4.11 Special IPO Adjustment to Conversion Price of Series G-3 Preferred Stock. In the event of a Public Offering or Qualifying Public Offering, the Conversion Price of the Series G-3 Preferred Stock then in effect shall be adjusted downward to an amount equal to the lesser of (i) the product of (x) the price per share of Class A Common Stock sold in such Public Offering or Qualifying Public Offering and (y) the Applicable Discount, and (ii) $51.5762 (as adjusted (1) for any stock dividends, combinations, splits, recapitalizations or the like and/or (2) in an appropriate manner pursuant to Section 4.4.4 above as if such amount were the Conversion Price of the Series G-3 Preferred Stock). "***Applicable Discount***" means (i) 90% in the event a Public Offering or Qualifying Public Offering is consummated on or prior to June 30, 2023, or (ii) 85% in the event a Public Offering or Qualifying Public Offering is consummated after June 30, 2023. The downward adjustment of the Conversion Price of the Series G-3 Preferred Stock, if any, pursuant to this Section 4.11 shall occur effective as of immediately prior to any conversion of the Series G-3 Preferred Stock into Class A Common Stock in connection with a Public Offering or Qualifying Public Offering (or, in the event that no such conversion occurs, effective as of immediately prior to the closing of such public offering), and for the avoidance of doubt, shall be reflected in the number of shares of Class A Common Stock into which each share of Series G-3 Preferred Stock are converted in connection with such public offering, including, without limitation, a conversion pursuant to Section 5.1.1(a). Notwithstanding the foregoing, the Conversion Price of Series G-3 Preferred Stock shall not be reduced at such time if the amount of such reduction would be less than $0.01.

4.12 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the applicable Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Preferred Stock furnish or cause to be furnished to such holder a certificate setting forth (i) the applicable Conversion Price then in effect, and (ii) the number of shares of Voting Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Preferred Stock.

4.13 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least ten (10) days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events.

5.1.1 Preferred Stock.

(a) Upon either (i) the closing of the sale of shares of Class A Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $100,000,000 of gross proceeds to the Corporation, before deductions of the underwriting discount and commissions (a "***Public Offering***"), or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of a majority of the outstanding shares of Series G-4 Preferred Stock, voting as a separate class (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Series G-4 Preferred Stock Mandatory Conversion Time***"), (A) all outstanding shares of Series G-4 Preferred Stock shall automatically be converted into shares of Class A Common Stock, in each case at the then effective conversion rate and (B) such shares may not be reissued by the Corporation.

(b) Upon either (i) the closing of a Public Offering, or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of a majority of the outstanding shares of Series G-3 Preferred Stock, voting as a separate class (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Series G-3 Preferred Stock Mandatory Conversion Time***"), (A) all outstanding shares of Series G-3 Preferred Stock shall automatically be converted into shares of Class A Common Stock, in each case at the then effective conversion rate and (B) such shares may not be reissued by the Corporation.

(c) Upon either (i) the closing of the sale of shares of Class A Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, at an offering price per share of not less than $68.7683 (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Class A Common Stock), resulting in at least $100,000,000 of gross proceeds to the Corporation, before deductions of the underwriting discount and commissions (a "***Qualifying Public Offering***"), or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of a majority of the outstanding shares of Series G-2 Preferred Stock, voting as a separate class (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Series G-2 Preferred Stock Mandatory Conversion Time***"), (A) all outstanding shares of Series G-2 Preferred Stock shall automatically be converted into shares of Class A Common Stock, in each case at the then effective conversion rate and (B) such shares may not be reissued by the Corporation.

(d) Upon either (i) the closing of a Qualifying Public Offering, or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of a majority of the outstanding shares of Series G Preferred Stock, voting as a separate class (the time of such closing or the date and time specified or the time of the event specified in

such vote or written consent is referred to herein as the "***Series G Preferred Stock Mandatory Conversion Time***"), (A) all outstanding shares of Series G Preferred Stock shall automatically be converted into shares of Class A Common Stock, in each case at the then effective conversion rate and (B) such shares may not be reissued by the Corporation.

(e) Upon either (i) the closing of a Qualifying Public Offering, or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of a majority of the outstanding shares of Series F Preferred Stock, voting as a separate class (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Series F Preferred Stock Mandatory Conversion Time***"), (A) all outstanding shares of Series F Preferred Stock shall automatically be converted into shares of Class A Common Stock, in each case at the then effective conversion rate and (B) such shares may not be reissued by the Corporation.

(f) Upon either (i) the closing of a Qualifying Public Offering, or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of at least a majority of the outstanding shares of Series E Preferred Stock, voting as a separate class (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Series E Preferred Stock Mandatory Conversion Time***"), (A) all outstanding shares of Series E Preferred Stock shall automatically be converted into shares of Class A Common Stock, in each case at the then effective conversion rate and (B) such shares may not be reissued by the Corporation.

(g) Upon either (i) the closing of a Qualifying Public Offering, or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of at least sixty percent (60%) of the outstanding shares of Series D Preferred Stock, voting as a separate class (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Series D Preferred Stock Mandatory Conversion Time***"), (A) all outstanding shares of Series D Preferred Stock shall automatically be converted into shares of Class A Common Stock, in each case at the then effective conversion rate and (B) such shares may not be reissued by the Corporation.

(h) Upon either (i) the closing of a Qualifying Public Offering, or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of at least sixty percent (60%) of the outstanding shares of Series C Preferred Stock, voting as a separate class (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Series C Preferred Stock Mandatory Conversion Time***"), (A) all outstanding shares of Series C Preferred Stock shall automatically be converted into shares of Class A Common Stock, in each case at the then effective conversion rate and (B) such shares may not be reissued by the Corporation.

(i) Upon either (i) the closing of the sale of shares of Class A Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, at an offering price of not less than the Series B-2 Original Issue Price, resulting in at least $20,000,000 of gross proceeds to the Corporation, before deductions of the underwriting discount and commissions, or (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the

holders of a majority of the outstanding shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, Series B Preferred Stock and Series A Preferred Stock, voting together as a single class as measured on the basis of voting power set forth in this Restated Certificate (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Preferred Stock Mandatory Conversion Time***"), (A) all outstanding shares of Series B-2 Preferred Stock, Series B-1 Preferred Stock, and Series A Preferred Stock shall automatically be converted into shares of Class A Common Stock and all outstanding shares of Series B Preferred Stock shall automatically be converted into shares of Class B Common Stock, in each case at the then effective conversion rate, and (B) such shares may not be reissued by the Corporation. In addition, each share of Series B Preferred Stock shall automatically be converted into shares of Class A Common Stock, based on the then-effective Conversion Price, upon any sale, assignment, transfer, conveyance, hypothecation or other disposition of any legal or beneficial interest in such share, whether or not for value and whether voluntary or involuntary or by operation of law (a "***Series B Preferred Transfer***"), other than (i) any Series B Preferred Transfer without consideration by a holder of Series B Preferred Stock to such holder's ancestors, descendants, siblings or spouse or to trusts or other entities established primarily for the purpose of estate planning for the benefit of such persons or such holder, (ii) any Series B Preferred Transfer or Transfers by a holder of Series B Preferred Stock to another holder of Series B Preferred Stock or its Controlled Affiliate (as defined below), (iii) any Series B Preferred Transfer or Transfers to Controlled Affiliates, or (iv) any Series B Preferred Transfer or Transfers by (A) a partnership transferring to its partners or former partners in accordance with their interest in the partnership, (B) a corporation transferring to a wholly-owned subsidiary, its stockholders or to former stockholders in accordance with their interest in the corporation, or (C) a limited liability company transferring to its members or former members in accordance with their interest in the limited liability company. For purposes of this Restated Certificate, "***Controlled Affiliate***" shall mean, with respect to any person or entity, any other person or entity which, directly or indirectly, is controlled by, or is under common control with, such person or entity, where "control" shall mean and include the ownership or eighty percent (80%) or more of the voting securities or other voting interest of another person or entity.

5.1.2 Nonvoting Common Stock. Upon the closing of the sale of shares of Class A Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the time of such closing is referred to herein as the "***Nonvoting Mandatory Conversion Time***"), then each outstanding share of Nonvoting Stock shall automatically be converted into one (1) share of Class A Common Stock. The Series G-4 Preferred Stock Mandatory Conversion Time, Series G-3 Preferred Stock Mandatory Conversion Time, Series G-2 Preferred Stock Mandatory Conversion Time, Series G Preferred Stock Mandatory Conversion Time, Series F Preferred Stock Mandatory Conversion Time, Series E Preferred Stock Mandatory Conversion Time, Series D Preferred Stock Mandatory Conversion Time, Series C Preferred Stock Mandatory Conversion Time, Preferred Stock Mandatory Conversion Time and the Nonvoting Mandatory Conversion Time shall each be referred to as the "***Mandatory Conversion Time***", as applicable.

5.2 Procedural Requirements. All holders of record of shares of each series of Preferred Stock and Nonvoting Common Stock shall be sent written notice of the applicable Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of such series of Preferred Stock and Nonvoting Common Stock pursuant to this

Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of such series of Preferred Stock and Nonvoting Common Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock and Nonvoting Common Stock converted pursuant to Section 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Voting Common Stock), as applicable, will terminate at the applicable Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender the certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Section 5.2. As soon as practicable after the applicable Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock or Nonvoting Common Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Voting Common Stock issuable on such conversion in accordance with the provisions hereof, (b) pay cash as provided in Section 4.2 in lieu of any fraction of a share of Voting Common Stock otherwise issuable upon such conversion, and (c) pay any declared or accrued but unpaid dividends on the shares of Preferred Stock or Nonvoting Common Stock converted (including, without limitation, all accrued but unpaid Series G-4 PIK Dividends, Series G-3 PIK Dividends, Series G Accruing Dividends, Series F Accruing Dividends, Series E Accruing Dividends, Series D Accruing Dividends, Series C Accruing Dividends, Series B-2 Accruing Dividends, Series B-1 Accruing Dividends, Series B Accruing Dividends or Series A Accruing Dividends, as applicable), at the Corporation's option, in either (i) cash or (ii) in the case of a public offering, shares of Voting Common Stock determined by dividing (A) the aggregate amount of such unpaid dividends by (B) the final per share public offering price of such securities (and pay cash as provided in Section 4.2 in lieu of any fraction of a share of Voting Common Stock otherwise issuable upon such payment in shares of Voting Common Stock). Such converted Preferred Stock and Nonvoting Common Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock or Nonvoting Common Stock accordingly.

6. Redemption.

6.1 Series G-4 Preferred Stock. Unless prohibited by Delaware law governing distributions to stockholders, shares of Series G-4 Preferred Stock shall be redeemed by the Corporation at a price equal to the Series G-4 Original Issue Price, plus any accrued but unpaid Series G-4 PIK Dividends, whether or not declared, together with any other dividends declared but unpaid thereon (the "***Series G-4 Redemption Price***"), in one (1) cash payment (such date of redemption, the "***Series G-4 Redemption Date***") not more than sixty (60) days after receipt by the Corporation, at any time during the period commencing on the date that is seven (7) years from

the Original Issue Date of the Series G-4 Preferred Stock and ending sixty (60) days thereafter, of written notice from the holders of a majority of the then outstanding shares of Series G-4 Preferred Stock, voting as a separate class and series, requesting redemption of all shares of Series G-4 Preferred Stock (the "***Series G-4 Redemption Request***"); provided, however, that Series G-4 Excluded Shares (as defined below) shall not be redeemed. Upon receipt of a Series G-4 Redemption Request, the Corporation shall apply all of its assets to any such redemption, and to no other corporate purpose, except to the extent prohibited by Delaware law governing distributions to stockholders. If, on the Series G-4 Redemption Date, Delaware law governing distributions to stockholders prevents the Corporation from redeeming all shares of Series G-4 Preferred Stock to be redeemed, then the Corporation shall ratably redeem the maximum number of shares that it may redeem consistent with such law, and shall redeem the remaining shares as soon as it may lawfully do so under such law. The Corporation shall send written notice of the mandatory redemption (the "***Series G-4 Redemption Notice***") to each holder of record of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and Series D Preferred Stock at least fifteen (15) days but no more than thirty (30) days prior to the Series G-4 Redemption Date. The Series G-4 Redemption Notice shall state (i) the number of shares of Series G-4 Preferred Stock held by the holder that the Corporation shall redeem on the Series G-4 Redemption Date, (ii) the Series G-4 Redemption Date and the Series G-4 Redemption Price, (iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Section 4.1.2), and (iv) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series G-4 Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the tenth (10th) day after the date of delivery of the Series G-4 Redemption Notice to a holder of Series G-4 Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6.1, then the shares of Series G-4 Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "***Series G-4 Excluded Shares***." Series G-4 Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6.1, whether on such Series G-4 Redemption Date or thereafter.

6.2 Series G-3 Preferred Stock. Unless prohibited by Delaware law governing distributions to stockholders, shares of Series G-3 Preferred Stock shall be redeemed by the Corporation at a price equal to the Series G-3 Original Issue Price, plus any accrued but unpaid Series G-3 PIK Dividends, whether or not declared, together with any other dividends declared but unpaid thereon (the "***Series G-3 Redemption Price***"), in one (1) cash payment (such date of redemption, the "***Series G-3 Redemption Date***") not more than sixty (60) days after receipt by the Corporation, at any time during the period commencing on the date that is seven (7) years from the Original Issue Date of the Series G-4 Preferred Stock and ending sixty (60) days thereafter, of written notice from the holders of a majority of the then outstanding shares of Series G-3 Preferred Stock, voting as a separate class and series, requesting redemption of all shares of Series G-3 Preferred Stock (the "***Series G-3 Redemption Request***"); provided, however, that Series G-3 Excluded Shares (as defined below) shall not be redeemed. Upon receipt of a Series G-3 Redemption Request, the Corporation shall apply all of its assets to any such redemption, and to no other corporate purpose, except to the extent prohibited by Delaware law governing distributions to stockholders. If, on the Series G-3 Redemption Date, Delaware law governing

distributions to stockholders prevents the Corporation from redeeming all shares of Series G-3 Preferred Stock to be redeemed, then the Corporation shall ratably redeem the maximum number of shares that it may redeem consistent with such law, and shall redeem the remaining shares as soon as it may lawfully do so under such law. The Corporation shall send written notice of the mandatory redemption (the "***Series G-3 Redemption Notice***") to each holder of record of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and Series D Preferred Stock at least fifteen (15) days but no more than thirty (30) days prior to the Series G-3 Redemption Date. The Series G-3 Redemption Notice shall state (i) the number of shares of Series G-3 Preferred Stock held by the holder that the Corporation shall redeem on the Series G-3 Redemption Date, (ii) the Series G-3 Redemption Date and the Series G-3 Redemption Price, (iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Section 4.1.2), and (iv) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series G-3 Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the tenth (10th) day after the date of delivery of the Series G-3 Redemption Notice to a holder of Series G-3 Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6.2, then the shares of Series G-3 Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "***Series G-3 Excluded Shares***." Series G-3 Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6.2, whether on such Series G-3 Redemption Date or thereafter.

6.3 Series G-2 Preferred Stock. Unless prohibited by Delaware law governing distributions to stockholders, shares of Series G-2 Preferred Stock shall be redeemed by the Corporation at a price equal to the Series G-2 Original Issue Price per share, together with any other dividends declared but unpaid thereon (the "***Series G-2 Redemption Price***"), in one (1) cash payment (such date of redemption, the "***Series G-2 Redemption Date***") not more than sixty (60) days after receipt by the Corporation, at any time during the period commencing on the date that is seven (7) years from the Original Issue Date of the Series G-4 Preferred Stock and ending sixty (60) days thereafter, of written notice from the holders of a majority of the then outstanding shares of Series G-2 Preferred Stock, voting as a separate class and series, requesting redemption of all shares of Series G-2 Preferred Stock (the "***Series G-2 Redemption Request***"); provided, however, that Series G-2 Excluded Shares (as defined below) shall not be redeemed. Upon receipt of a Series G-2 Redemption Request, the Corporation shall apply all of its assets to any such redemption, and to no other corporate purpose, except to the extent prohibited by Delaware law governing distributions to stockholders. If, on the Series G-2 Redemption Date, Delaware law governing distributions to stockholders prevents the Corporation from redeeming all shares of Series G-2 Preferred Stock to be redeemed, then the Corporation shall ratably redeem the maximum number of shares that it may redeem consistent with such law, and shall redeem the remaining shares as soon as it may lawfully do so under such law. The Corporation shall send written notice of the mandatory redemption (the "***Series G-2 Redemption Notice***") to each holder of record of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and Series D Preferred Stock at least fifteen (15) days but no more than thirty (30) days prior to the Series G-2 Redemption Date. The Series G-2 Redemption Notice shall state (i) the number of shares of Series G-2

Preferred Stock held by the holder that the Corporation shall redeem on the Series G-2 Redemption Date, (ii) the Series G-2 Redemption Date and the Series G-2 Redemption Price, (iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Section 4.1.2), and (iv) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series G-2 Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the tenth (10^{th}) day after the date of delivery of the Series G-2 Redemption Notice to a holder of Series G-2 Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6.3, then the shares of Series G-2 Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "***Series G-2 Excluded Shares***." Series G-2 Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6.3, whether on such Series G-2 Redemption Date or thereafter.

6.4 Series G Preferred Stock. Unless prohibited by Delaware law governing distributions to stockholders, shares of Series G Preferred Stock shall be redeemed by the Corporation at a price equal to the Series G Original Issue Price per share, plus any Series G Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon (the "***Series G Redemption Price***"), in one (1) cash payment (such date of redemption, the "***Series G Redemption Date***") not more than sixty (60) days after receipt by the Corporation, at any time during the period commencing on the date that is seven (7) years from the Original Issue Date of the Series G-4 Preferred Stock and ending sixty (60) days thereafter, of written notice from the holders of a majority of the then outstanding shares of Series G Preferred Stock, voting as a separate class and series, requesting redemption of all shares of Series G Preferred Stock (the "***Series G Redemption Request***"); provided, however, that Series G Excluded Shares (as defined below) shall not be redeemed. Upon receipt of a Series G Redemption Request, the Corporation shall apply all of its assets to any such redemption, and to no other corporate purpose, except to the extent prohibited by Delaware law governing distributions to stockholders. If, on the Series G Redemption Date, Delaware law governing distributions to stockholders prevents the Corporation from redeeming all shares of Series G Preferred Stock to be redeemed, then the Corporation shall ratably redeem the maximum number of shares that it may redeem consistent with such law, and shall redeem the remaining shares as soon as it may lawfully do so under such law. The Corporation shall send written notice of the mandatory redemption (the "***Series G Redemption Notice***") to each holder of record of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and Series D Preferred Stock at least fifteen (15) days but no more than thirty (30) days prior to the Series G Redemption Date. The Series G Redemption Notice shall state (i) the number of shares of Series G Preferred Stock held by the holder that the Corporation shall redeem on the Series G Redemption Date, (ii) the Series G Redemption Date and the Series G Redemption Price, (iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Section 4.1.2), and (iv) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series G Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the tenth (10th) day after the date of delivery of the Series G Redemption Notice to a holder of Series G Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6.4, then the shares of Series G Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "***Series G Excluded Shares***." Series G Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6.4, whether on such Series G Redemption Date or thereafter.

6.5 Series F Preferred Stock. Unless prohibited by Delaware law governing distributions to stockholders, shares of Series F Preferred Stock shall be redeemed by the Corporation at a price equal to the Series F Original Issue Price per share, plus any Series F Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon (the "***Series F Redemption Price***"), in one (1) cash payment (such date of redemption, the "***Series F Redemption Date***") not more than sixty (60) days after receipt by the Corporation, at any time during the period commencing on the date that is seven (7) years from the Original Issue Date of the Series G-4 Preferred Stock and ending sixty (60) days thereafter, of written notice from the holders of a majority of the then outstanding shares of Series F Preferred Stock, voting as a separate class and series, requesting redemption of all shares of Series F Preferred Stock (the "***Series F Redemption Request***"); provided, however, that Series F Excluded Shares (as defined below) shall not be redeemed. Upon receipt of a Series F Redemption Request, the Corporation shall apply all of its assets to any such redemption, and to no other corporate purpose, except to the extent prohibited by Delaware law governing distributions to stockholders. If, on the Series F Redemption Date, Delaware law governing distributions to stockholders prevents the Corporation from redeeming all shares of Series F Preferred Stock to be redeemed, then the Corporation shall ratably redeem the maximum number of shares that it may redeem consistent with such law, and shall redeem the remaining shares as soon as it may lawfully do so under such law. The Corporation shall send written notice of the mandatory redemption (the "***Series F Redemption Notice***") to each holder of record of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and Series D Preferred Stock at least fifteen (15) days but no more than thirty (30) days prior to the Series F Redemption Date. The Series F Redemption Notice shall state (i) the number of shares of Series F Preferred Stock held by the holder that the Corporation shall redeem on the Series F Redemption Date, (ii) the Series F Redemption Date and the Series F Redemption Price, (iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Section 4.1.2), and (iv) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series F Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the tenth (10th) day after the date of delivery of the Series F Redemption Notice to a holder of Series F Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6.5, then the shares of Series F Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "***Series F Excluded Shares***." Series F Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6.5, whether on such Series F Redemption Date or thereafter.

6.6 Series E Preferred Stock. Unless prohibited by Delaware law governing distributions to stockholders, shares of Series E Preferred Stock shall be redeemed by the Corporation at a price equal to the Series E Original Issue Price per share, plus any Series E Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon (the "***Series E Redemption Price***"), in one (1) cash payment (such date of redemption, the "***Series E Redemption Date***") not more than sixty (60) days after receipt by the Corporation, at any time during the period commencing on the date that is seven (7) years from the Original Issue Date of the Series G-4 Preferred Stock and ending sixty (60) days thereafter, of written notice from the holders of a majority of the then outstanding shares of Series E Preferred Stock, voting as a separate class and series, requesting redemption of all shares of Series E Preferred Stock (the "***Series E Redemption Request***"); provided, however, that Series E Excluded Shares (as defined below) shall not be redeemed. Upon receipt of a Series E Redemption Request, the Corporation shall apply all of its assets to any such redemption, and to no other corporate purpose, except to the extent prohibited by Delaware law governing distributions to stockholders. If, on the Series E Redemption Date, Delaware law governing distributions to stockholders prevents the Corporation from redeeming all shares of Series E Preferred Stock to be redeemed, then the Corporation shall ratably redeem the maximum number of shares that it may redeem consistent with such law, and shall redeem the remaining shares as soon as it may lawfully do so under such law. The Corporation shall send written notice of the mandatory redemption (the "***Series E Redemption Notice***") to each holder of record of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and Series D Preferred Stock at least fifteen (15) days but no more than thirty (30) days prior to the Series E Redemption Date. The Series E Redemption Notice shall state (i) the number of shares of Series E Preferred Stock held by the holder that the Corporation shall redeem on the Series E Redemption Date, (ii) the Series E Redemption Date and the Series E Redemption Price, (iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Section 4.1.2), and (iv) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series E Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the tenth (10th) day after the date of delivery of the Series E Redemption Notice to a holder of Series E Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6.6, then the shares of Series E Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "***Series E Excluded Shares***." Series E Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6.6, whether on such Series E Redemption Date or thereafter.

6.7 Series D Preferred Stock. Unless prohibited by Delaware law governing distributions to stockholders, shares of Series D Preferred Stock shall be redeemed by the Corporation at a price equal to the Series D Original Issue Price per share, plus any Series D Accruing Dividends accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon (the "***Series D Redemption Price***"), in one (1) cash payment (such date of redemption, the "***Series D Redemption Date***" and together with each of the Series G Redemption Date, the Series F Redemption Date and the Series E Redemption Date, a "***Redemption Date***") not more than sixty (60) days after receipt by the Corporation, at any time

during the period commencing on the date that is seven (7) years from the Original Issue Date of the Series G-4 Preferred Stock and ending sixty (60) days thereafter, of written notice from the holders of at least sixty percent (60%) of the then outstanding shares of Series D Preferred Stock, voting as a separate class and series, requesting redemption of all shares of Series D Preferred Stock (the "***Series D Redemption Request***"); provided, however, that Series D Excluded Shares (as defined below) shall not be redeemed. Upon receipt of a Series D Redemption Request, the Corporation shall apply all of its assets to any such redemption, and to no other corporate purpose, except to the extent prohibited by Delaware law governing distributions to stockholders. If, on the Series D Redemption Date, Delaware law governing distributions to stockholders prevents the Corporation from redeeming all shares of Series D Preferred Stock to be redeemed, then the Corporation shall ratably redeem the maximum number of shares that it may redeem consistent with such law, and shall redeem the remaining shares as soon as it may lawfully do so under such law. The Corporation shall send written notice of the mandatory redemption (the "***Series D Redemption Notice***") to each holder of record of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and Series D Preferred Stock at least fifteen (15) days but no more than thirty (30) days prior to the Series D Redemption Date. The Series D Redemption Notice shall state (i) the number of shares of Series D Preferred Stock held by the holder that the Corporation shall redeem on the Series D Redemption Date, (ii) the Series D Redemption Date and the Series D Redemption Price, (iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Section 4.1.2), and (iv) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series D Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the tenth (10^{th}) day after the date of delivery of the Series D Redemption Notice to a holder of Series D Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this Section 6.7, then the shares of Series D Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "***Series D Excluded Shares***." Series D Excluded Shares shall not be redeemed or redeemable pursuant to this Section 6.7, whether on such Series D Redemption Date or thereafter.

6.8 Priority of Redemption Payments. Notwithstanding anything in Section 6.1, Section 6.2, Section 6.3, Section 6.4, Section 6.5, Section 6.6 or Section 6.7 to the contrary, if (i) the Corporation receives a Series G-4 Redemption Request, Series G-3 Redemption Request, Series G-2 Redemption Request, Series G Redemption Request, Series F Redemption Request, Series E Redemption Request and/or a Series D Redemption Request, and (ii) on the applicable Redemption Date, Delaware law governing distributions to stockholders prevents the Corporation from redeeming all of the shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and/or Series D Preferred Stock, then the Corporation shall so notify the holders of shares of Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and/or Series D Preferred Stock, as applicable, and the Corporation shall redeem such shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock and/or Series D Preferred Stock in the following order of priority: (A) *first*, the Corporation shall redeem the number of shares of Series G-4 Preferred Stock which the

Corporation may redeem in a manner consistent with such law, *pro rata* among all holders of Series G-4 Preferred Stock, and shall redeem the remaining shares of Series G-4 Preferred Stock as soon as it may lawfully do so under such law; (B) *second*, after redemption of all shares of Series G-4 Preferred Stock, the Corporation shall redeem the number of shares of Series G-3 Preferred Stock which the Corporation may redeem in a manner consistent with such law, *pro rata* among all holders of Series G-3 Preferred Stock, and shall redeem the remaining shares of Series G-3 Preferred Stock as soon as it may lawfully do so under such law (C) *third*, after redemption of all shares of Series G-4 Preferred Stock and Series G-3 Preferred Stock, the Corporation shall redeem the number of shares of Series G-2 Preferred Stock which the Corporation may redeem in a manner consistent with such law, *pro rata* among all holders of Series G-2 Preferred Stock, and shall redeem the remaining shares of Series G-2 Preferred Stock as soon as it may lawfully do so under such law; (D) *fourth*, after redemption of all shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock and Series G-2 Preferred Stock, the Corporation shall redeem the number of shares of Series G Preferred Stock which the Corporation may redeem in a manner consistent with such law, *pro rata* among all holders of Series G Preferred Stock, and shall redeem the remaining shares of Series G Preferred Stock as soon as it may lawfully do so under such law; (E) *fifth*, after redemption of all shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock and Series G Preferred Stock, the Corporation shall redeem the number of shares of Series F Preferred Stock which the Corporation may redeem in a manner consistent with such law, *pro rata* among all holders of Series F Preferred Stock, and shall redeem the remaining shares of Series F Preferred Stock as soon as it may lawfully do so under such law; (F) *sixth*, after redemption of all shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock and Series F Preferred Stock, the Corporation shall redeem the number of shares of Series E Preferred Stock which the Corporation may redeem in a manner consistent with such law, *pro rata* among all holders of Series E Preferred Stock, and shall redeem the remaining shares of Series E Preferred Stock as soon as it may lawfully do so under such law; and (G) *seventh*, after redemption of all shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock and Series E Preferred Stock, the Corporation shall redeem the number of shares of Series D Preferred Stock which the Corporation may redeem in a manner consistent with such law, *pro rata* among all holders of Series D Preferred Stock, and shall redeem the remaining shares of Series D Preferred Stock as soon as it may lawfully do so under such law.

6.9 Surrender of Certificates; Payment. On or before the Series G-4 Redemption Date, Series G-3 Redemption Date, Series G-2 Redemption Date, Series G Redemption Date, Series F Redemption Date, Series E Redemption Date and/or the Series D Redemption Date, each holder of Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock or Series D Preferred Stock, as applicable, having shares redeemed shall, if a holder of shares in certificated form, surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Series G-4 Redemption Notice, Series G-3 Redemption Notice, Series G-2 Redemption Notice, Series G Redemption Notice, Series F Redemption Notice, Series E Redemption Notice or the Series D Redemption Notice, and thereupon the Series G-3 Redemption Notice, Series G-2 Redemption Notice, Series G

Redemption Notice, Series F Redemption Price, Series E Redemption Price or the Series D Redemption Price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof.

6.10 Rights Subsequent to Redemption. If the Series G-4 Redemption Notice, Series G-3 Redemption Notice, Series G-2 Redemption Notice, Series G Redemption Notice, the Series F Redemption Notice, the Series E Redemption Notice or the Series D Redemption Notice shall have been duly given, and if the Series G-4 Redemption Price, Series G-3 Redemption Price, Series G-2 Redemption Price, Series G Redemption Price, the Series F Redemption Price, the Series E Redemption Price or the Series D Redemption Price payable upon redemption of the shares of Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock or Series D Preferred Stock to be redeemed (or shares of Voting Common Stock into which such shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock or Series D Preferred Stock have been converted) is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that any certificates evidencing any of the shares of Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock or Series D Preferred Stock (or shares of Voting Common Stock into which such shares of Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock or Series D Preferred Stock have been converted) so called for redemption shall not have been surrendered, dividends with respect to such shares shall cease to accrue after such date and all rights with respect to such shares shall forthwith after such date terminate, except only the right of the holders to receive the Series G-4 Redemption Price, Series G-3 Redemption Price, Series G-2 Redemption Price, Series G Redemption Price, Series F Redemption Price, the Series E Redemption Price or the Series D Redemption Price, as applicable, without interest upon surrender of any such certificate or certificates therefor.

6.11 Failure to Pay Redemption Price. If, for any reason, the Corporation fails to pay the Series G-4 Redemption Price, Series G-3 Redemption Price, Series G-2 Redemption Price, Series G Redemption Price, the Series F Redemption Price, the Series E Redemption Price and/or the Series D Redemption Price when due (including as a result of any applicable law prohibiting payment), then:

6.11.1 The Corporation shall, if requested by (i) the holders of a majority of the outstanding shares of Series G-4 Preferred Stock subject to redemption, voting as a separate class and series, upon failure to pay the Series G-4 Redemption Price, (ii) the holders of a majority of the outstanding shares of Series G-3 Preferred Stock subject to redemption, voting as a separate class and series, upon failure to pay the Series G-3 Redemption Price, (iii) the holders of a majority of the outstanding shares of Series G-2 Preferred Stock subject to redemption, voting as a separate class and series, upon failure to pay the Series G-2 Redemption Price, (iv) the holders of a majority of the outstanding shares of Series G Preferred Stock subject to redemption, voting as a separate class and series, upon failure to pay the Series G Redemption Price, (v) the holders of a majority of the outstanding shares of Series F Preferred Stock subject to redemption, voting as a separate class and series, upon failure to pay the Series F Redemption Price, (vi) the holders of a majority of the outstanding shares of Series E Preferred Stock subject to redemption, voting

as a separate class and series, upon failure to pay the Series E Redemption Price, or (vii) the holders of at least sixty percent (60%) of the outstanding shares of Series D Preferred Stock subject to redemption, voting as a separate class and series, upon failure to pay the Series D Redemption Price, in each case by delivery of written notice to the Corporation, initiate a sale process (the "***Sale Process***") in accordance with this Section 6.11, intended to result in a transaction constituting a Deemed Liquidation Event. In furtherance of the foregoing, upon receipt of such written notice, the Corporation shall, and shall cause its officers, employees, consultants, counsel and advisors to use all commercially reasonable efforts to consummate a transaction that would constitute a Deemed Liquidation Event, including without limitation by taking (or causing to be taken) the actions set forth in this Section 6.11; provided, that this obligation and the obligations set forth in Subsections 6.11.2 and 6.11.3 shall not require the Board or the stockholders of the Corporation to approve any transaction that would constitute a Deemed Liquidation Event.

6.11.2 The Corporation shall engage a reputable investment bank (the "***Financial Advisor***") to assist with the Sale Process. The Financial Advisor, as well as any other advisors engaged pursuant to this Subsection 6.11.2, shall represent the Corporation, and only the Corporation, in the Sale Process, and the costs, fees and expenses of such advisors shall be paid by the Corporation (or may be paid through a reduction from the sale proceeds payable to the stockholders of the Corporation).

6.11.3 Without limiting the generality of the provisions of Subsection 6.11.1, the Corporation shall, at the request of (i) the holders of a majority of the outstanding shares of Series G-4 Preferred Stock subject to redemption, voting as a separate class and series, (ii) the holders of a majority of the outstanding shares of Series G-3 Preferred Stock subject to redemption, voting as a separate class and series, (iii) the holders of a majority of the outstanding shares of Series G-2 Preferred Stock subject to redemption, voting as a separate class and series, (iv) the holders of a majority of the outstanding shares of Series G Preferred Stock subject to redemption, voting as a separate class and series, (v) the holders of a majority of the outstanding shares of Series F Preferred Stock subject to redemption, voting as a separate class and series, (vi) the holders of a majority of the outstanding shares of Series E Preferred Stock subject to redemption, voting as a separate class and series, or (vii) the holders of at least sixty percent (60%) of the outstanding shares of Series D Preferred Stock subject to redemption, voting as a separate class and series, as applicable, and shall cause its employees, officers, consultants, counsel and advisors to:

(a) engage the Financial Advisor to provide a valuation of the Corporation and create a list of potential acquirers;

(b) assist the Financial Advisor in creating a list of potential acquirers;

(c) cause the Financial Advisor to contact potential acquirers and solicit offers with respect to the Sale Process from such potential acquirers as identified by the Financial Advisor and approved by the Corporation;

(d) set up and maintain a virtual or actual data room containing due diligence materials customarily provided in connection with a Sale Process, together with any other due diligence materials reasonably requested by any potential acquirer;

(e) execute customary non-disclosure agreements with potential acquirers;

(f) prepare, or assist the Financial Advisor with the preparation of, any marketing, financial or other materials deemed by the Financial Advisor to be necessary or helpful in connection with the Sale Process;

(g) attend and participate in any meetings, conference calls, or presentations regarding the Corporation and its business with potential acquirers; and

(h) subject to approval of the Corporation's Board of Directors, execute a letter of intent or term sheet on terms and conditions reasonably acceptable to the Corporation.

6.11.4 The Corporation shall, upon the request of (i) the holders of a majority of the outstanding shares of Series G-4 Preferred Stock subject to redemption, voting as a separate class and series, (ii) the holders of a majority of the outstanding shares of Series G-3 Preferred Stock subject to redemption, voting as a separate class and series, (iii) the holders of a majority of the outstanding shares of Series G-2 Preferred Stock subject to redemption, voting as a separate class and series, (iv) the holders of a majority of the outstanding shares of Series G Preferred Stock subject to redemption, voting as a separate class and series, (v) the holders of a majority of the outstanding shares of Series F Preferred Stock subject to redemption, voting as a separate class and series, (vi) the holders of a majority of the outstanding shares of Series E Preferred Stock subject to redemption, voting as a separate class and series, or (vii) the holders of at least sixty percent (60%) of the outstanding shares of Series D Preferred Stock subject to redemption, voting as a separate class and series, as applicable, call a meeting of the Corporation's Board of Directors to discuss or vote on a proposed transaction constituting a Deemed Liquidation Event or other matters relating to the Sale Process; provided, that nothing herein shall require the Corporation's Board of Directors to approve any Deemed Liquidation Event.

6.11.5 The covenants set forth in this Section 6.11 shall terminate and be of no further force or effect upon the earlier of (i) the date immediately prior to the consummation of a Public Offering, (ii) the date when the Corporation first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Securities Exchange Act of 1934, as amended, or (iii) a Deemed Liquidation Event.

7. Converted, Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are converted, redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

8. Waiver. Any of the rights, powers, preferences and other terms of the Series G-4 Preferred Stock set forth herein may be waived on behalf of all holders of Series G-4 Preferred

Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series G-4 Preferred Stock then outstanding, voting as a separate class. Any of the rights, powers, preferences and other terms of the Series G-3 Preferred Stock set forth herein may be waived on behalf of all holders of Series G-3 Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series G-3 Preferred Stock then outstanding, voting as a separate class. Any of the rights, powers, preferences and other terms of the Series G-2 Preferred Stock set forth herein may be waived on behalf of all holders of Series G-2 Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series G-2 Preferred Stock then outstanding, voting as a separate class. Any of the rights, powers, preferences and other terms of the Series G Preferred Stock set forth herein may be waived on behalf of all holders of Series G Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series G Preferred Stock then outstanding, voting as a separate class. Any of the rights, powers, preferences and other terms of the Series F Preferred Stock set forth herein may be waived on behalf of all holders of Series F Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series F Preferred Stock then outstanding, voting as a separate class. Any of the rights, powers, preferences and other terms of the Series E Preferred Stock set forth herein may be waived on behalf of all holders of Series E Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series E Preferred Stock then outstanding, voting as a separate class. Any of the rights, powers, preferences and other terms of the Series D Preferred Stock set forth herein may be waived on behalf of all holders of Series D Preferred Stock by the affirmative written consent or vote of the holders of at least sixty percent (60%) of the shares of Series D Preferred Stock then outstanding, voting as a separate class. Any of the rights, powers, preferences and other terms of the Series C Preferred Stock set forth herein may be waived on behalf of all holders of Series C Preferred Stock by the affirmative written consent or vote of the holders of at least sixty percent (60%) of the shares of Series C Preferred Stock then outstanding, voting as a separate class. Any of the rights, powers, preferences and other terms of any other series of Preferred Stock (other than the Series E Preferred Stock, Series D Preferred Stock and Series C Preferred Stock) set forth herein may be waived on behalf of all holders of such series of Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of such series of Preferred Stock then outstanding.

9. Notices. Any notice required or permitted by the provisions of this Article Seventh to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the DGCL, and shall be deemed sent upon such mailing or electronic transmission.

EIGHTH: Subject to any additional vote required by this Restated Certificate or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

NINTH: Subject to any additional vote required by this Restated Certificate, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

TENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

ELEVENTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board or in the Bylaws of the Corporation.

TWELFTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the DGCL or any other law of the State of Delaware is amended after approval by the stockholders of this Article Twelfth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL as so amended.

Any repeal or modification of the foregoing provisions of this Article Twelfth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

THIRTEENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which the DGCL permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the DGCL.

Any amendment, repeal or modification of the foregoing provisions of this Article Thirteenth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

FOURTEENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "***Excluded Opportunity***" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, "***Covered Persons***"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation. Any repeal or modification of this Article Fourteenth will only be prospective and will not affect the rights under this Article Fourteenth in effect at the time of the occurrence or of any actions or omissions to act giving rise to liability. Notwithstanding anything to the contrary contained elsewhere in this Amended and Restated Certificate of Incorporation, the affirmative vote of the Requisite Preferred Holders will be required to amend or repeal or to adopt any provisions inconsistent with this Article Fourteenth.

FIFTEENTH: The following indemnification provisions shall apply to the persons enumerated below.

1. Right to Indemnification of Directors and Officers. The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "***Indemnified Person***") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "***Proceeding***"), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such Indemnified Person in such Proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section 3 of this Article Fifteenth, the Corporation shall be required to indemnify an Indemnified Person in connection with a Proceeding (or part thereof) commenced by such Indemnified Person only if the commencement of such Proceeding (or part thereof) by the Indemnified Person was authorized in advance by the Board of Directors of the Corporation.

2. Prepayment of Expenses of Directors and Officers. The Corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnified Person in defending any Proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the Indemnified Person to repay all amounts advanced if it should be ultimately determined that the Indemnified Person is not entitled to be indemnified under this Article Fifteenth or otherwise.

3. Claims by Directors and Officers. If a claim for indemnification or advancement of expenses under this Article Fifteenth is not paid in full within thirty (30) days after a written claim therefor by the Indemnified Person has been received by the Corporation, the Indemnified Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Indemnified Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

4. Indemnification of Employees and Agents. The Corporation may indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any Proceeding by reason of the fact that such person, or a person for whom such person is the legal representative, is or was an employee or agent of the Corporation or, while an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such person in connection with such Proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board of Directors of

the Corporation in its sole discretion. Notwithstanding the foregoing sentence, the Corporation shall not be required to indemnify a person in connection with a Proceeding initiated by such person if the Proceeding was not authorized in advance by the Board of Directors of the Corporation.

5. Advancement of Expenses of Employees and Agents. The Corporation may pay the expenses (including attorneys' fees) incurred by an employee or agent in defending any Proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board of Directors of the Corporation.

6. Non-Exclusivity of Rights. The rights conferred on any person by this Article Fifteenth shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the certificate of incorporation, these by-laws, agreement, vote of stockholders or disinterested directors or otherwise.

7. Other Indemnification. The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise.

8. Insurance. The Board of Directors of the Corporation may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article Fifteenth; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article Fifteenth.

9. Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article Fifteenth shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Indemnified Person and such person's heirs, executors and administrators.

SIXTEENTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or Bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which

the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Sixteenth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Sixteenth (including, without limitation, each portion of any sentence of this Article Sixteenth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

* * *

4. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the DGCL.

5. That this Eleventh Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this corporation's Tenth Amended and Restated Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the DGCL.

IN WITNESS WHEREOF, this Eleventh Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 11th day of October, 2023.

By: /s/ Ryan Fukushima
Ryan Fukushima
Chief Operating Officer

Exhibit 10.1

ELEVENTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

This ELEVENTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT is made as of October 11, 2023, by and among Tempus Labs, Inc., a Delaware corporation (the "***Company***"), each of the investors listed on Schedule A hereto, each of whom is referred to in this Agreement as an "***Investor***" and each of the stockholders listed on Schedule B hereto, each of whom is referred to in this Agreement as a "***Common Holder***."

WHEREAS, the Company and certain of the Investors are parties to the Series G-4 Preferred Stock Purchase Agreement, of even date herewith (the "***Series G-4 Purchase Agreement***"), pursuant to which such Investors have agreed to purchase shares of the Series G-4 Preferred Stock of the Company, par value $0.0001 per share ("***Series G-4 Preferred Stock***");

WHEREAS, certain of the Investors hold shares of Series A Preferred Stock, par value $0.0001 per share ("***Series A Preferred Stock***"), Series B Preferred Stock of the Company, par value $0.0001 per share ("***Series B Preferred Stock***"), Series B-1 Preferred Stock of the Company, par value $0.0001 per share ("***Series B-1 Preferred Stock***"), Series B-2 Preferred Stock of the Company, par value $0.0001 per share ("***Series B-2 Preferred Stock***"), Series C Preferred Stock of the Company, par value $0.0001 per share ("***Series C Preferred Stock***"), Series D Preferred Stock of the Company, par value $0.0001 per share ("***Series D Preferred Stock***"), Series E Preferred Stock of the Company, par value $0.0001 per share ("***Series E Preferred Stock***"), Series F Preferred Stock of the Company, par value $0.0001 per share ("***Series F Preferred Stock***"), Series G Preferred Stock of the Company, par value $0.0001 per share ("***Series G Preferred Stock***"), Series G-2 Preferred Stock of the Company, par value $0.0001 per share ("***Series G-2 Preferred Stock***"), Series G-3 Preferred Stock of the Company, par value $0.0001 per share ("***Series G-3 Preferred Stock***"), and/or Voting Common Stock and possess registration rights, information rights, rights of first offer and other rights pursuant to that certain Tenth Amended and Restated Investors' Rights Agreement dated as of April 18, 2022, by and among the parties thereto (the "***Prior Agreement***");

WHEREAS, the parties to the Prior Agreement desire to amend and restate the Prior Agreement in its entirety with this Agreement; and

WHEREAS, the Investors, the Common Holders and the Company hereby agree that this Agreement shall govern the rights of the Investors and the Common Holders to cause the Company to register shares of Voting Common Stock issuable to the Investors, to receive certain information from the Company, and to participate in future equity offerings by the Company, and shall govern certain other matters as set forth in this Agreement.

NOW, THEREFORE, the parties hereby agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "***Affiliate***" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including, without limitation, any general partner, managing member, officer or director of such Person or any venture capital fund or other investment fund now or hereafter existing that is

controlled by such Person or by one or more general partners or managing members of, or shares the same (or an affiliate of the same) management company, common investment management or investment adviser with, such Person.

1.2 "***Baillie Gifford***" means Baillie Gifford & Co., Baillie Gifford Overseas Limited and any successor or affiliated registered investment advisor to the Baillie Gifford Investors.

1.3 "***Baillie Gifford Investors***" means the Investors that are advisory clients of Baillie Gifford.

1.4 "***Certificate***" means the Company's Eleventh Amended and Restated Certificate of Incorporation, as filed with the Office of the Secretary of State of the State of Delaware on the date hereof, as may be amended from time to time.

1.5 "***CFIUS Approval***" means (i) the Company and the applicable Purchaser(s) shall have received written notice from CFIUS that review under Section 721 of the Defense Production Act of 1950 as amended by the Foreign Investment Risk Review Modernization Act of 2018, including implementing regulations thereof, 31 C.F.R. Parts 800 and 802 (the "***DPA***"), of the transactions contemplated hereby has been concluded, and CFIUS shall have determined that there are no unresolved national security concerns with respect to the transactions contemplated hereby, and advised that action under Section 721 of the DPA, and any investigation related thereto, has been concluded with respect to the transactions contemplated hereby; (ii) CFIUS shall have concluded that the transactions contemplated hereby are not covered transactions and are not subject to review under Section 721 of the DPA; or (iii) CFIUS shall have sent a report to the President of the United States (the "***President***") requesting the President's decision on the notice and either (1) the period under Section 721 of the DPA during which the President may announce his decision to take action to suspend or prohibit the transactions contemplated hereby shall have expired without any such action being announced or taken or (2) the President shall have announced a decision not to take any action to suspend or prohibit the transactions contemplated hereby.

1.6 "***Class A Common Stock***" means shares of the Class A Common Stock, $0.0001 par value per share.

1.7 "***Class B Common Stock***" means shares of the Class B Common Stock, $0.0001 par value per share.

1.8 "***Common Stock***" means, collectively, the shares of the Company's Voting Common Stock and the Nonvoting Common Stock.

1.9 "***Damages***" means any claim, loss, damage or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such claim, loss, damage or liability (or any action in respect thereof) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make

the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.10 "***Derivative Securities***" means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly), Common Stock, including options and warrants.

1.11 "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.12 "***Excluded Registration***" means (i) a registration relating to the sale of securities to employees of the Company or an Affiliate pursuant to a stock option, stock purchase, or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.13 "***Form S-1***" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.14 "***Form S-3***" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.15 "***GAAP***" means generally accepted accounting principles in the United States.

1.16 "***Google***" means Google LLC, a Delaware limited liability company, together with its subsidiaries and Affiliates.

1.17 "***Holder***" means any holder of Registrable Securities who is a party to this Agreement.

1.18 "***Immediate Family Member***" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships, of a natural person referred to herein.

1.19 "***Initiating Holders***" means, collectively, Holders who properly initiate a registration request under this Agreement.

1.20 "***IPO***" means the Company's first underwritten public offering of its Common Stock under the Securities Act.

1.21 "***Lightbank***" means, collectively, Innovation Group Investors, L.P., Lightbank Investments 1B, LLC, Gray Media, LLC, Blue Media, LLC, Keeks, LLC, Tempus Series B Investments, LLC, Tempus Series B-1 Investments, LLC, and Tempus Series B-2 Investments, LLC, Tempus Series C Investments, LLC, Tempus Series D Investments, LLC, Tempus Series E Investments, LLC and Tempus Series G Investments, LLC.

1.22 "***Major Investor***" means (i) any Investor or Common Holder that, individually or together with such Investor's or Common Holder's Affiliates, holds at least 1,000,000 shares of Registrable Securities (as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof), (ii) each T. Rowe Price Investor that holds any Registrable Securities, (iii) any Baillie Gifford Investor that holds any Registrable Securities, and (iv) each Neuberger Investor that continues to satisfy the Neuberger Rights Threshold.

1.23 "***NEA***" means, collectively, New Enterprise Associates 16, L.P. and any of its Affiliates.

1.24 "***Neuberger***" means Neuberger Berman Investment Advisers LLC and/or NB Alternatives Advisers LLC and any successor or affiliated registered investment advisor to the Neuberger Investors.

1.25 "***Neuberger Investors***" means Neuberger Berman Principal Strategies PRIMA Fund LP, Neuberger Berman Principal Strategies PRIMA Co-Invest Fund IV LP, PRIMA MLP Fund LP and any other Investors that are investment management or management advisory clients of Neuberger.

1.26 "***Neuberger Rights Threshold***" means, with respect to each Neuberger Investor that such Neuberger Investor continues to hold all of the shares of Preferred Stock initially purchased by such Neuberger Investor or shares of capital stock issued upon conversion of such shares of Preferred Stock (such number subject to appropriate adjustment in the event of any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof).

1.27 "***New Securities***" means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.28 "***Nonvoting Common Stock***" means the shares of the Company's Nonvoting Common Stock, $0.0001 par value per share.

1.29 "***Novo***" means Novo Holdings A/S and any of its Affiliates.

1.30 "***Novo Side Letter***" means that certain letter agreement dated May 29, 2019, by and among the Company, Novo and the Founder Stockholders (as defined therein), a copy of which is attached hereto as Exhibit A.

1.31 "***Person***" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.32 "***Preferred Stock***" means, collectively, the shares of the Company's Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series B-2 Preferred Stock, Series C Preferred Stock, Series D Preferred Stock, Series E Preferred Stock, Series F Preferred Stock, Series G Preferred Stock, Series G-2 Preferred Stock, Series G-3 Preferred Stock and Series G-4 Preferred Stock.

1.33 "***Registrable Securities***" means (a) the Voting Common Stock, (b) the Voting Common Stock issuable or issued upon conversion of the Preferred Stock, (c) any Common Stock, or any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company, acquired or held by the Investors or the Common Holders; and (d) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clauses (a) or (b) above; excluding in all cases, however, (i) any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Section 6.1, (ii) excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Section 2.13 of this Agreement, and (iii) Voting Common Stock that has been converted from Nonvoting Common Stock and any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, such Voting Common Stock.

1.34 "***Registrable Securities Then Outstanding***" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.35 "***Required Approvals***" means all consents, approvals, clearances or other authorizations of, and expiration of waiting periods required by, any governmental authorities required under applicable laws, including the CFIUS Approval.

1.36 "***Restricted Securities***" means the securities of the Company required to bear the legend set forth in Section 2.12(b) hereof.

1.37 "***Revolution***" means, collectively, Revolution Growth III, LP and any of its Affiliates.

1.38 "***SEC***" means the Securities and Exchange Commission.

1.39 "***SEC Rule 144***" means Rule 144 promulgated by the SEC under the Securities Act.

1.40 "***SEC Rule 145***" means Rule 145 promulgated by the SEC under the Securities Act.

1.41 "***Securities Act***" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.42 "***Selling Expenses***" means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Section 2.6.

1.43 "***T. Rowe Price***" means T. Rowe Price Associates, Inc. and any successor or affiliated registered investment advisor to the T. Rowe Price Investors.

1.44 "***T. Rowe Price Investors***" means the Investors that are advisory clients of T. Rowe Price.

1.45 "***Voting Common Stock***" means shares of the Class A Common Stock and Class B Common Stock.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) If at any time after one hundred eighty (180) days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of at least a majority of the Registrable Securities Then Outstanding that the Company file a Form S-1 registration statement with respect to all or any portion of their Registrable Securities if the anticipated aggregate offering price, net of Selling Expenses, would exceed $15,000,000, then the Company shall (i) within ten (10) days after the date such request is given, give notice thereof (the "***Demand Notice***") to all Holders other than the Initiating Holders, and (ii) as soon as practicable, and in any event within sixty (60) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Section 2.1(c) and Section 2.3.

(b) If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least twenty percent (20%) of the Registrable Securities Then Outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $1,000,000, then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Section 2.1(c) and Section 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Section 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Company's Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to be filed and it is therefore necessary to defer the filing of such registration statement, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than sixty (60) days after the request of the Initiating Holders is given; *provided, however*, that the Company may not invoke this right more than once in any twelve (12) month period; and *provided further*, that the Company shall not register any securities for its own account or that of any other stockholder during such ninety (90)-day period other than pursuant to any Excluded Registrations.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration or file any registration statement pursuant to Section 2.1(a) (i) during the period commencing on the date that that is ninety (90) days before the Company's good faith estimate of the date of filing of, and ending on a date that is one hundred eighty (180) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected two registrations pursuant to Section 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Section 2.1(b).

(e) The Company shall not be obligated to effect, or to take any action to effect, any registration or file any registration statement pursuant to Section 2.1(b) (i) during the period commencing on the date that is thirty (30) days before the Company's good faith estimate of the date of filing of, and ending on a date that is ninety (90) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) if the Company has effected two registrations pursuant to Section 2.1(b) within the twelve (12)-month period immediately preceding the date of such request; or (iii) if the Company has effected a registration pursuant to Section 2.1(b) within the six (6)-month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Section 2.1(e) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Section 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Section 2.1(e) except as provided in Section 2.6.

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its securities under the Securities Act in connection with the public offering of such securities solely for cash (other than in a registration relating to a demand pursuant to Section 2.1 or an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Section 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in

such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Section 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Section 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Section 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Company and shall be reasonably acceptable to a majority in interest of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Section 2.4(e)) enter into and perform their obligations under an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Section 2.3, if the managing underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Section 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by

each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, (ii) the number of Registrable Securities comprised of shares of Common Stock issued or issuable upon conversion of the Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock and Series C Preferred Stock included in the offering be reduced unless all other securities ranking junior to the Series G-4 Preferred Stock, Series G-3 Preferred Stock, Series G-2 Preferred Stock, Series G Preferred Stock, Series F Preferred Stock, Series E Preferred Stock, Series D Preferred Stock and Series C Preferred Stock in respect of liquidation preferences (other than securities to be sold by the Company) are first entirely excluded from the offering, or (iii) the number of Registrable Securities included in the offering be reduced below twenty-five percent (25%) of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Section 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

(c) For purposes of Subsection 2.1, a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Section 2.3(a), fewer than fifty percent (50%) of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in the registration statement has been completed; *provided, however*, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended for up to one hundred eighty (180) days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; *provided*, that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, not to exceed $30,000, of one counsel for the selling Holders ("***Selling Holder Counsel***"), shall be borne and paid by the Company; *provided, however*, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Section 2.1(a) or Section 2.1(b), as the case may be; *provided further* that if, at the time of such withdrawal, the Holders shall have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness after learning of such information, then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Section 2.1(a) or Section 2.1(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders (other than fees and dissbursements of counsel to any Holder, other than the Selling Holder Counsel, which shall be borne solely by the Holder engaging such counsel) pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of each such Holder; legal counsel, accountants and investment advisers for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling

Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; *provided, however*, that the indemnity agreement contained in this Section 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; *provided, however*, that the indemnity agreement contained in this Section 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and *provided further*, that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Sections 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; *provided, however*, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall not relieve such indemnifying party of any liability to the indemnified party under this Section 2.8, except to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Section 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Section 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Section 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; *provided, however*, that, in any such case, (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and *provided further*, that in no event shall a Holder's liability pursuant to this Section 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Section 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Section 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies) and (ii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of at least a majority of the Registrable Securities Then Outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that would allow such holder or prospective holder to include such securities in any registration unless (i) such other registration rights are subordinate to the registration rights granted to the Holders hereunder and the inclusion of such securities will not reduce the amount of the Registrable Securities of the Holders that are included in a given registration and (ii) the holders of such rights are subject to market standoff obligations no more favorable to such persons than those contained herein.

2.11 "Market Stand-off" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the IPO and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days) (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held immediately before the effective date of the registration statement for the IPO or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash or otherwise. The foregoing provisions of this Section 2.11 (A) shall apply only to the IPO, (B) shall not apply to shares of Common Stock acquired in the IPO or in the open market following the IPO, (C) shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement and (D) shall be applicable to the Holders only if all officers and directors are subject to the same restrictions and the Company

obtains a similar agreement from all stockholders individually owning more than one percent (1%) of the outstanding Common Stock (after giving effect to the conversion into Common Stock of all outstanding Preferred Stock). The underwriters in connection with such registration are intended third-party beneficiaries of this Section 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section 2.11 or that are necessary to give further effect thereto. If any of the obligations described in this Section 2.11 are waived or terminated with respect to any of the securities of any such Holder, officer, director or greater than one-percent stockholder (in any such case, the "***Released Securities***"), the foregoing provisions shall be waived or terminated, as applicable, to the same extent and with respect to the same percentage of securities of each Holder as the percentage of Released Securities represent with respect to the securities held by the applicable Holder, officer, director or greater than one-percent stockholder, subject, in the case of an underwritten offering, to any applicable cut-back priority rights set forth in this Agreement.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder shall cause any proposed purchaser, pledgee, or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement. Notwithstanding the foregoing, the Company shall not require any transferee of shares pursuant to an effective registration statement or, following the IPO, SEC Rule 144, in each case, to be bound by the terms of this Agreement.

(b) Each certificate or instrument representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Section 2.12(c)) be stamped or otherwise imprinted with a legend substantially in the following form (in addition to any legend required under applicable state securities laws):

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN ELEVENTH AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Section 2.12.

(c) The holder of each certificate representing Restricted Securities, by acceptance thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction or, following the IPO, the transfer is made pursuant to SEC Rule 144, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144 or (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration; *provided*, that, with respect to transfers under the foregoing clause (y), each transferee agrees in writing to be subject to the terms of this Section 2.12. Each certificate or instrument evidencing the Restricted Securities transferred as above provided shall bear, except if such transfer is made pursuant to SEC Rule 144 or pursuant to an effective registration statement, the appropriate restrictive legend set forth in Section 2.12(b), except that such certificate shall not bear such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Section 2.1 or Section 2.2 shall terminate upon the earliest to occur of (a) the closing of a Deemed Liquidation Event, as such term is defined in the Certificate, (b) such time after the consummation of the IPO as Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Holder's shares without limitation during a three-month period without registration (and without the requirement for the Company to be in compliance with the current public information required under Rule 144(c)(1)) and such Holder holds less than one percent (1%) of the outstanding capital stock of the Company and (c) the fifth anniversary of the consummation of the IPO (or such later date that is one hundred eighty (180) days following the expiration of all deferrals of the Company's obligations pursuant to Section 2 that remain in effect as of the fifth anniversary of the consummation of the IPO).

3. Information Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Investor (*provided*, that the Board of Directors has not reasonably determined that such Major Investor is a competitor of the Company; *provided*, *further*, that none of NEA, Revolution, any T. Rowe Price Investor, any Baillie Gifford Investor or any Neuberger Investor shall be deemed a competitor for purposes of this Agreement solely due to an investment in a portfolio company that is a competitor of the Company; and *provided*, *further*, that Google LLC shall not be deemed a competitor of the Company):

(a) as soon as practicable, but in any event within ninety (90) days after the end of each fiscal year of the Company, (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and (iii) a statement of stockholders' equity as of the end of such year, all prepared in accordance with GAAP (except that such financial statements may not contain all notes thereto that may be required in accordance with GAAP), which financial statements shall be audited and certified by independent public accountants of nationally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within thirty (30) days after the end of each quarter of each fiscal year of the Company, unaudited statements of income and cash flows for such fiscal quarter and an unaudited balance sheet and a statement of stockholders' equity as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) as soon as practicable, but in any event within thirty (30) days after the end of each quarter of each fiscal year of the Company, a detailed capitalization table of the Company as of the end of such fiscal quarter; and

(d) such other information relating to the financial condition, business, prospects or corporate affairs of the Company as any Major Investor may from time to time reasonably request, provided that the Company shall not be obligated under this Section 3.1(c) to provide information (i) that the Company reasonably determines in good faith to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in a form reasonably acceptable to the Company); or (ii) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Section 3.1 to the contrary, the Company may cease providing the information set forth in this Section 3.1 during the period starting with the date sixty (60) days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; *provided*, that the Company's covenants under this Section 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

The Company shall promptly and accurately respond, and shall use its commercially reasonable efforts to cause its transfer agent to promptly respond, to reasonable requests for information made on behalf of any T. Rowe Price Investor or any Baillie Gifford Investor relating to (i) accounting or securities law matters required in connection with its audit or (ii) the actual holdings of the T. Rowe Price Investor or any Baillie Gifford Investor, respectively, including in relation to the total outstanding shares; provided, however, that the Company shall not be obligated to provide any such information that could reasonably result in a violation of applicable law or conflict with a confidentiality obligation of the Company. On or immediately prior to the effectiveness of the IPO, the Company shall provide each T. Rowe Price Investor and each Baillie Gifford Investor written confirmation of its equity holdings in the Company (on an as-converted basis).

Notwithstanding anything to the contrary contained in this Agreement, the Company and the Baillie Gifford Investors acknowledge and agree that, absent all Required Approvals, the Baillie Gifford Investors shall not request or obtain and Company shall not grant: (i) control (as defined in 31 C.F.R. § 800.208) of the Company; (ii) access to any material nonpublic technical information (as defined in 31 C.F.R. § 800.232) in the possession of the Company (which shall not include financial information about the Company), including access to any information not already in the public domain that is necessary to design, fabricate, develop, test, produce, or manufacture Company products or services, including processes, techniques, or methods; or (iii) any involvement (other than through voting of shares) in substantive decision making of the Company regarding the use, development, acquisition, or release of any of the Company's critical technologies (as defined in 31 C.F.R. § 800.215).

3.2 Inspection. The Company shall permit each Major Investor, at such Major Investor's expense, to visit and inspect the Company's properties, examine its books of account and records, and discuss the Company's affairs, finances, and accounts with its officers, during normal business hours of the Company as may be reasonably requested by such Major Investor; *provided, however*, that the Company shall not be obligated pursuant to this Section 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form reasonably acceptable to the Company) or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Observer Rights.

(a) For so long as the T. Rowe Price Investors own any shares of Preferred Stock or shares of capital stock issued upon conversion of such Preferred Stock, the Company shall give the T. Rowe Price Investors copies of all notices, minutes, consents and other materials that it provides to its directors at the same time and in the same manner as provided to such directors; provided, however, that all information so provided shall be subject to Section 3.5; and provided further, that the Company reserves the right to withhold any information if access to such information could adversely affect the attorney-client privilege between the Company and its counsel or would result in disclosure of trade secrets to the T. Rowe Price Investors.

(b) For so long as a Neuberger Investor satisfies the Neuberger Rights Threshold but ceasing when the Company engages legal counsel to prepare a registration statement on Form S-1 for its IPO, the Company shall give such Neuberger Investor copies of all notices, minutes, consents and other materials that it provides to its directors at the same time and in the same manner as provided to such directors; provided, however, that all information so provided shall be subject to Section 3.5; and provided further, that the Company reserves the right to withhold any information if access to such information could adversely affect the attorney-client privilege between the Company and its counsel or would result in disclosure of trade secrets to such Neuberger Investor.

3.4 Termination of Information Rights. The covenants set forth in Section 3.1, Section 3.2 and Section 3.3 shall terminate and be of no further force or effect (a) immediately before the consummation of the IPO, (b) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act or (c) upon a Deemed Liquidation Event, as such term is defined in the Certificate, whichever event occurs first; provided, that with respect to clause (c), the covenants set forth in Section 3.1 shall only terminate if the consideration received by the Investors in such Deemed Liquidation Event is in the form of cash and/or publicly traded securities unless the Investors receive financial information from the acquiring company or other successor to the Company comparable to those set forth in Section 3.1.

3.5 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 3.5 by such Investor), (b) is or has been independently developed or conceived by the Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to the Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; *provided, however*, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Section 3.5; (iii) to any Affiliate, partner, partner of a partner, member, director, officer stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, provided that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, court order or an applicable governmental or regulatory body, provided that the Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure. Notwithstanding the foregoing, a T. Rowe Price Investor, a Baillie Gifford Investor or a Neuberger Investor may identify the Company and the value of such T. Rowe Price Investor's, Baillie Gifford Investor's or Neuberger Investor's security holdings in the Company in accordance with applicable investment reporting and disclosure regulations or internal policies and respond to examinations, demands, requests or reporting requirements of a regulatory authority without prior notice to or consent from the Company.

The Company understands and acknowledges that in the regular course of a T. Rowe Price Investor's and a Baillie Gifford Investor's such T. Rowe Price Investor or Baillie Gifford Investor may invest in companies that have issued securities that are publicly traded (each, a "***Public Company***"). Accordingly, the Company covenants and agrees that before providing material non-public information about a Public Company ("***Public Company Information***") to a T. Rowe Price Investor or a Baillie Gifford Investor, the Company will use commercially reasonable efforts to provide prior written notice to the following compliance personnel at such T. Rowe Price Investor or such Baillie Gifford Investor, respectively, describing such information in reasonable detail:

For a T. Rowe Price Investor:

Ellen York, Vice President, ellen.york@troweprice.com, 410-345-4676 or in her absence to Sneha Parmar, Assistant Vice President, sneha.parmar@troweprice.com, 410-577-8644

For a Baillie Gifford Investor:

To the address set forth on Schedule A hereto.

The Company shall not disclose Public Company Information to any T. Rowe Price Investor or Baillie Gifford Investor without written authorization from the applicable compliance personnel listed above, provided, however, that, the Company will be permitted to disclose agreements entered into with Public Companies in the ordinary course of business, such as routine customer, supplier, advertising and publishing agreements without such written authorization.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Section 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Major Investor. Each Major Investor shall be entitled to apportion among itself and its Affiliates the right of first offer hereby granted to it in such proportions as it deems appropriate; *provided*, that the parties acknowledge and agree that each of Blue Media, LLC, Gray Media, LLC and Keeks, LLC have assigned a portion of their respective rights of first offer hereunder to Novo in accordance with and subject to the terms of Section 4(a) of the Novo Side Letter.

(a) The Company shall give notice (the "***Offer Notice***") to each Major Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within twenty (20) days after the Offer Notice is given, each Major Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the shares of Common Stock (assuming the conversion, exercise and exchange of all Derivative Securities then held by such Major Investor) then held by such Major Investor bears to the total Common Stock of the Company then outstanding (assuming full conversion, exercise and/or exchange, as applicable, of all Preferred Stock and other Derivative Securities then outstanding) ("***Pro Rata Portion***"). At the expiration of such twenty (20) day

period, the Company shall promptly notify each Major Investor that elects to purchase or acquire all the shares available to it (each, a "***Fully Exercising Investor***") of any other Major Investor's failure to do likewise. During the ten (10) day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Major Investors were entitled to subscribe but that were not subscribed for by the Major Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Section 4.1(b) shall occur on or before the later of one hundred twenty (120) days after the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Section 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Section 4.1(b), the Company may, during the ninety (90) day period following the expiration of the thirty (30) day period provided in Section 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within thirty (30) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Investors and the Common Holders in accordance with this Section 4.1.

(d) The right of first offer in this Section 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Certificate), (ii) shares of Common Stock issued in the IPO and (iii) the issuance of shares of Series G-4 Preferred Stock to Additional Purchasers pursuant to Section 1.3 of the Series G-4 Purchase Agreement.

4.2 Termination. The covenants set forth in Section 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act or (iii) upon a Deemed Liquidation Event, as such term is defined in the Certificate, whichever event occurs first.

5. Additional Covenants.

5.1 Employee Agreements. The Company will cause each Person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) to enter into a nondisclosure and proprietary rights assignment agreement, which will provide that such person (i) except as limited by applicable law, is either an at-will employee or a consultant of the Company, as the case may be, (ii) will maintain all proprietary information of the Company in confidence, (iii) will assign to the Company all inventions created by such person as an employee or consultant during the term of such person's

employment with or service to the Company, and (iv) will not disclose any information related to the Company's workforce and will not solicit any employees from the Company for a period of twelve months should such person's employment with or service to the Company be terminated for any reason.

5.2 Employee Stock. All grants of options to purchase capital stock, awards of shares of capital stock and grants of other equity incentive awards to the employees and consultants of the Company after the date hereof shall be approved by the Board of Directors. Unless otherwise approved by the Board of Directors, all employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the Company's capital stock after the date hereof shall be required to execute restricted stock or option agreements, as applicable, providing for (i) vesting of shares over a four (4) year period, with the first twenty-five percent (25%) of such shares vesting following twelve (12) months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following thirty-six (36) months, and (ii) a market stand-off provision substantially similar to that in Section 2.11. In addition, unless otherwise approved by the Board of Directors, the Company shall retain a "right of first refusal" on employee transfers until the consummation of the IPO and shall have the right to repurchase unvested shares at cost upon termination of employment of a holder of restricted stock.

5.3 Board Matters. Unless otherwise determined by the vote of a majority of the non-employee directors then in office, the Board of Directors shall meet at least quarterly in accordance with an agreed-upon schedule. The Company shall reimburse all non-employee directors for their actual and reasonable out-of-pocket travel and other expenses incurred in attending meetings of the Board or any committee thereof.

5.4 Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Company's Bylaws, its Certificate, or elsewhere, as the case may be.

5.5 Indemnification Matters. The Company hereby acknowledges that one (1) or more of the directors nominated to serve on the Board of Directors by the Investors (each a "***Fund Director***") may have certain rights to indemnification, advancement of expenses and/or insurance provided by one or more of the Investors and certain of their affiliates (collectively, the "***Fund Indemnitors***"). The Company hereby agrees (a) that it is the indemnitor of first resort (*i.e.*, its obligations to any such Fund Director are primary and any obligation of the Fund Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Fund Director are secondary), (b) that it shall be required to advance the full amount of expenses incurred by such Fund Director and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement by or on behalf of any such Fund Director to the extent legally permitted and as required by the Company's Certificate of Incorporation or Bylaws of the Company (or any agreement between the Company and such Fund Director), without regard to any rights such Fund Director may have against the Fund Indemnitors,

and, (c) that it irrevocably waives, relinquishes and releases the Fund Indemnitors from any and all claims against the Fund Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Fund Indemnitors on behalf of any such Fund Director with respect to any claim for which such Fund Director has sought indemnification from the Company shall affect the foregoing and the Fund Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Fund Director against the Company.

5.6 Right to Conduct Activities. The Company hereby agrees and acknowledges that Lightbank, NEA, Revolution, the T. Rowe Price Investors, the Baillie Gifford Investors, the Neuberger Investors and Google LLC invest in numerous companies, some of which may be deemed competitive with the Company's business (as currently conducted or as currently propose to be conducted). The Company hereby agrees that, to the extent permitted under applicable law, Lightbank, NEA, Revolution, the T. Rowe Price Investors, the Baillie Gifford Investors, the Neuberger Investors and Google LLC shall not be liable to the Company for any claim arising out of, or based upon, (i) the investment or acquisition by Lightbank, NEA, Revolution, the T. Rowe Price Investors, the Baillie Gifford Investors, the Neuberger Investors, Google LLC or any of their respective Affiliates, in any entity competitive with the Company, or (ii) actions taken by any director, officer, stockholder or other representative of Lightbank, NEA, Revolution, the T. Rowe Price Investors, the Baillie Gifford Investors, the Neuberger Investors and Google LLC or any of their respective Affiliates, to assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on the Company; *provided, however*, that the foregoing shall not relieve (x) any of the Investors from liability associated with the unauthorized disclosure of the Company's confidential information obtained pursuant to this Agreement, or (y) any director or officer of the Company from any liability associated with his or her fiduciary duties to the Company.

5.7 Insurance. The Company shall use its commercially reasonable efforts to maintain Directors and Officers liability insurance from a financially sound and reputable insurer in an amount and on terms and conditions satisfactory to the Board of Directors, until such time as the Board of Directors determines that such insurance should be discontinued. In addition, in the event that the Board of Directors determines that the Company should obtain term "key-person" insurance on Eric Lefkofsky, the Company shall use its commercially reasonable efforts to obtain and maintain such insurance from a financially sound and reputable insurer in an amount and on terms and conditions satisfactory to the Board of Directors, until such time as the Board of Directors, determines that such insurance should be discontinued. The key-person policy shall name the Company as loss payee, and neither policy shall be cancelable by the Company without prior approval by the Board of Directors.

5.8 FIRPTA Compliance. The Company shall provide prompt notice to NEA following any "determination date" (as defined in Treasury Regulation Section 1.897-2(c)(1)) on which the Company becomes a United States real property holding corporation. In addition, upon a written request by NEA made at reasonable intervals, the Company shall provide NEA with a written statement informing NEA whether NEA's interest in the Company constitutes a United States real property interest. The Company's determination shall comply with the requirements of

Treasury Regulation Section 1.897-2(h)(1) or any successor regulation, and the Company shall provide timely notice to the Internal Revenue Service, in accordance with and to the extent required by Treasury Regulation Section 1.897-2(h)(2) or any successor regulation, that such statement has been made. The Company's written statement to NEA shall be delivered to NEA within 10 days of NEA's written request therefor. The Company's obligation to furnish such written statement shall continue notwithstanding the fact that a class of the Company's stock may be regularly traded on an established securities market or the fact that there is no preferred stock then outstanding.

5.9 Matters Requiring Investor Director Approval. So long as the holders of Series C Preferred Stock are entitled to elect a Series C Director, the Company hereby covenants and agrees with each of the Investors that it shall not, without approval of the Board of Directors, enter into or be a party to any transaction with any director, officer, or Affiliate of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such Person, except for transactions contemplated by this Agreement, the Purchase Agreement, and transactions entered into in the ordinary course of business pursuant to reasonable requirements of the Company's business and upon fair and reasonable terms approved by a majority of the disinterested members of the Board of Directors.

5.10 Termination of Covenants. The covenants set forth in this Section 5, except for Sections 5.4 through 5.8, shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Certificate, whichever event occurs first.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (a) is an Affiliate, partner or member of a Holder, (b) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members or (c) after such transfer, holds at least 1,000,000 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations) or, if less, all of the Registrable Securities held by such Holder; *provided, however*, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Section 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or stockholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; *provided, further*, that all transferees who would not qualify individually for assignment of rights shall have a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement and all disputes or controversies arising out of or relating to this Agreement or the transactions contemplated hereby shall be governed by, and construed in accordance with, the internal laws of the State of Delaware, without regard to the laws of any other jurisdiction that might be applied because of the conflicts of laws principles of the State of Delaware.

6.3 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes**.**

6.4 Interpretation. When a reference is made in this Agreement to a Section, Article or Exhibit such reference shall be to a Section, Article or Exhibit of this Agreement unless otherwise indicated. The table of contents and headings contained in this Agreement or in any Exhibit are for convenience of reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. All words used in this Agreement will be construed to be of such gender or number as the circumstances require. Any capitalized terms used in any Exhibit but not otherwise defined therein shall have the meaning as defined in this Agreement. All Exhibits annexed hereto or referred to herein are hereby incorporated in and made a part of this Agreement as if set forth herein. The word "including" and words of similar import when used in this Agreement will mean "including, without limitation," unless otherwise specified.

6.5 Notices; Consent to Electronic Notice.

(a) All notices and other communications hereunder shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or: (a) personal delivery to the party to be notified; (b) when sent, if sent by electronic mail or facsimile during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day; provided, however, that no notice by the Company sent by facsimile only shall be deemed effective or delivered to the Baillie Gifford Investors or Google LLC, regardless of confirmation or receipt; (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (d) one (1) business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on Schedule A hereto, or to the principal office of the Company and to the attention of the Chief Executive Officer, in the case of the Company, or to such email address, facsimile number, or address as subsequently modified by written notice given in accordance with this Section 6.5. If notice is given to the Company, a copy (which shall not constitute notice) shall also be sent to Cooley, LLP, 110 North Wacker Drive, 42nd Floor, Chicago, IL 60606, Attn: Richard E. Ginsberg (rginsberg@cooley.com).

(b) Each Investor consents to the delivery of any stockholder notice pursuant to the Delaware General Corporation Law (the "***DGCL***"), as amended or superseded from time to time, by electronic transmission pursuant to Section 232 of the DGCL (or any successor thereto) at the electronic mail address or the facsimile number as on the books of the Company; provided, however, that no notice by the Company sent by facsimile only shall be deemed effective or delivered to the Baillie Gifford Investors or Google LLC, regardless of confirmation or receipt. Each Investor agrees to promptly notify the Company of any change in such stockholder's electronic mail address, and that failure to do so shall not affect the foregoing.

6.6 Amendments and Waivers.

(a) Any term of this Agreement may be amended, modified or terminated and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of (i) the Company, (ii) the Common Holders and the Investors then holding a majority of the Voting Common Stock and Preferred Stock (voting together as a single class as measured on the basis of voting power set forth in the Restated Certificate), (iii) the Investors then holding a majority of the shares of Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, and Series B-2 Preferred Stock, voting together as a single class as measured on the basis of voting power set forth in this Restated Certificate, if such amendment, modification, termination or waiver would adversely affect the powers, preferences or rights of such series of Preferred Stock set forth herein (*provided*, that for the avoidance of doubt, the creation, authorization or issuance of any shares of preferred stock with rights senior to or *pari passu* with the powers, preferences or rights of such series of Preferred Stock held by such Investor, or the granting to purchasers of such shares rights senior to or *pari passu* with the powers, preferences or rights of such series of Preferred Stock held by such holders, shall not be deemed to adversely affect the rights or obligations of such holders), (iv) the Investors then holding at least sixty percent (60%) of the shares of Common Stock issued or issuable upon conversion of the Series C Preferred Stock, voting as a separate class, if such amendment, modification, termination or waiver would adversely affect the rights or obligations of the Investors holding Common Stock issued or issuable upon conversion of the Series C Preferred Stock set forth herein (*provided*, that for the avoidance of doubt, the creation, authorization or issuance of any shares of preferred stock with rights senior to or *pari passu* with the powers, preferences or rights of the Series C Preferred Stock held by such Investors, or the granting to purchasers of such shares rights senior to or *pari passu* with the powers, preferences or rights of the Series C Preferred Stock held by such Investors, shall not be deemed to adversely affect the rights or obligations of such Investors), (v) the Investors then holding at least sixty percent (60%) of the shares of Common Stock issued or issuable upon conversion of the Series D Preferred Stock, voting as a separate class, if such amendment, modification, termination or waiver would adversely affect the rights or obligations of the Investors holding Common Stock issued or issuable upon conversion of the Series D Preferred Stock set forth herein (*provided*, that for the avoidance of doubt, the creation, authorization or issuance of any shares of preferred stock with rights senior to or *pari passu* with the powers, preferences or rights of the Series D Preferred Stock held by such Investors, or the granting to purchasers of such shares rights senior to or *pari passu* with the powers, preferences or rights of the Series D Preferred Stock held by such Investors, shall not be deemed to adversely affect the rights or obligations of such Investors), (vi) the Investors then holding a majority of the shares of Common Stock issued or issuable upon conversion of the Series E Preferred Stock, voting as a separate class, if such amendment, modification, termination

or waiver would adversely affect the rights or obligations of the Investors holding Common Stock issued or issuable upon conversion of the Series E Preferred Stock set forth herein (*provided*, that for the avoidance of doubt, the creation, authorization or issuance of any shares of preferred stock with rights senior to or *pari passu* with the powers, preferences or rights of the Series E Preferred Stock held by such Investors, or the granting to purchasers of such shares rights senior to or *pari passu* with the powers, preferences or rights of the Series E Preferred Stock held by such Investors, shall not be deemed to adversely affect the rights or obligations of such Investors), (vii) the Investors then holding a majority of the shares of Common Stock issued or issuable upon conversion of the Series F Preferred Stock, voting as a separate class, if such amendment, modification, termination or waiver would adversely affect the rights or obligations of the Investors holding Common Stock issued or issuable upon conversion of the Series F Preferred Stock set forth herein (*provided*, that for the avoidance of doubt, the creation, authorization or issuance of any shares of preferred stock with rights senior to or *pari passu* with the powers, preferences or rights of the Series F Preferred Stock held by such Investors, or the granting to purchasers of such shares rights senior to or *pari passu* with the powers, preferences or rights of the Series F Preferred Stock held by such Investors, shall not be deemed to adversely affect the rights or obligations of such Investors), (viii) the Investors then holding a majority of the shares of Common Stock issued or issuable upon conversion of the Series G Preferred Stock, voting as a separate class, if such amendment, modification, termination or waiver would adversely affect the rights or obligations of the Investors holding Common Stock issued or issuable upon conversion of the Series G Preferred Stock set forth herein (*provided*, that for the avoidance of doubt, the creation, authorization or issuance of any shares of preferred stock with rights senior to or *pari passu* with the powers, preferences or rights of the Series G Preferred Stock held by such Investors, or the granting to purchasers of such shares rights senior to or *pari passu* with the powers, preferences or rights of the Series G Preferred Stock held by such Investors, shall not be deemed to adversely affect the rights or obligations of such Investors), (ix) the Investors then holding a majority of the shares of Common Stock issued or issuable upon conversion of the Series G-2 Preferred Stock, voting as a separate class, if such amendment, modification, termination or waiver would adversely affect the rights or obligations of the Investors holding Common Stock issued or issuable upon conversion of the Series G-2 Preferred Stock set forth herein (*provided*, that for the avoidance of doubt, the creation, authorization or issuance of any shares of preferred stock with rights senior to or *pari passu* with the powers, preferences or rights of the Series G-2 Preferred Stock held by such Investors, or the granting to purchasers of such shares rights senior to or *pari passu* with the powers, preferences or rights of the Series G-2 Preferred Stock held by such Investors, shall not be deemed to adversely affect the rights or obligations of such Investors), (x) the Investors then holding a majority of the shares of Common Stock issued or issuable upon conversion of the Series G-3 Preferred Stock, voting as a separate class, if such amendment, modification, termination or waiver would adversely affect the rights or obligations of the Investors holding Common Stock issued or issuable upon conversion of the Series G-3 Preferred Stock set forth herein (*provided*, that for the avoidance of doubt, the creation, authorization or issuance of any shares of preferred stock with rights senior to or *pari passu* with the powers, preferences or rights of the Series G-3 Preferred Stock held by such Investors, or the granting to purchasers of such shares rights senior to or *pari passu* with the powers, preferences or rights of the Series G-3 Preferred Stock held by such Investors, shall not be deemed to adversely affect the rights or obligations of such Investors), and (xi) the Investors then holding a majority of the shares of Common Stock issued or issuable upon conversion of the Series G-4 Preferred Stock, voting as

a separate class, if such amendment, modification, termination or waiver would adversely affect the rights or obligations of the Investors holding Common Stock issued or issuable upon conversion of the Series G-4 Preferred Stock set forth herein (*provided*, that for the avoidance of doubt, the creation, authorization or issuance of any shares of preferred stock with rights senior to or *pari passu* with the powers, preferences or rights of the Series G-4 Preferred Stock held by such Investors, or the granting to purchasers of such shares rights senior to or *pari passu* with the powers, preferences or rights of the Series G-4 Preferred Stock held by such Investors, shall not be deemed to adversely affect the rights or obligations of such Investors); *provided*, that (i) Sections 2.11, 3.1, 3.3 and 3.4 shall not be modified, supplemented, amended or waived, in whole or in part, (A) in a manner that adversely affects the T. Rowe Price Investors, without the prior written consent of the T. Rowe Price Investors holding a majority of the Registable Securities held by all T. Rowe Price Investors or (B) in a manner that adversely affects the Baillie Gifford Investors, without the prior written consent of the Baillie Gifford Investors holding a majority of the Registable Securities held by all Baillie Gifford Investors, (ii) Sections 3.1, 3.3 and 3.4 shall not be modified, supplemented, amended or waived, in whole or in part, in a manner that adversely affects the Neuberger Investors, without the prior written consent of the Neuberger Investors holding a majority of the Registable Securities held by all Neuberger Investors, and (iii) the Company may in its sole discretion waive compliance with Section 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Section 2.12(c) shall be deemed to be a waiver); *provided, further*, that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, the provisions of Section 4.1 may not be amended, modified, terminated or waived without the written consent of the holders of a majority of the Preferred Stock then outstanding and held by the Major Investors (it being agreed that a waiver of the provisions of Section 4.1 with respect to a particular transaction shall be deemed to apply to all Major Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Major Investors may nonetheless, by agreement with the Company, purchase securities in such transaction); *provided*, that the proviso in the second sentence of Section 4.1 shall not be modified, supplemented, amended or waived, in whole or in part, without the prior written consent of Novo. Notwithstanding anything to the contrary herein, no amendment or waiver that adversely affects any Investor in a manner disproportionate to any adverse effect such amendment or waiver would have on the rights or obligations of the other Investors holding the same series of Preferred Stock shall be effective against such Investor without such Investor's prior written consent.

(b) The Company shall give prompt notice of any amendment or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, termination, or waiver. Any amendment, termination, or waiver effected in accordance with this Section 6.6 shall be binding on all parties hereto, regardless of whether any such party has executed such consent or instrument or otherwise consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliates may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof. This Agreement supersedes all prior written agreements, arrangements, communications and understandings, and all prior and contemporaneous oral agreements, arrangements, communications and understandings between the parties with respect to the subject matter hereof, including without limitation, the Prior Agreement.

6.10 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of Delaware and to the jurisdiction of any United States District Court in the state of Delaware for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of Delaware or any United States District Court in the state of Delaware, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court. The prevailing party shall be entitled to reasonable attorneys' fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled.

6.11 WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL

6.12 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other

party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

6.13 Acknowledgment. The Company acknowledges that the Investors are in the business of venture capital investing and therefore review the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which compete directly or indirectly with those of the Company. Nothing in this Agreement shall preclude or in any way restrict the Investors from investing or participating in any particular enterprise whether or not such enterprise has products or services which compete with those of the Company.

6.14 Amendment and Restatement of Prior Agreement. The Prior Agreement is hereby amended in its entirety and restated herein. Such amendment and restatement is effective upon the execution of this Agreement by the Company and the holders of a majority of the Registrable Securities (as defined in the Prior Agreement), regardless of whether any other party has executed this Agreement. Upon such execution, all provisions of, rights granted and covenants made in the Prior Agreement are hereby waived, released and superseded in their entirety and shall have no further force or effect, including, without limitation, all rights of first refusal and any notice period associated therewith otherwise applicable to the transactions contemplated by the Series G-4 Purchase Agreement.

[Remainder of this page intentionally left blank.]

IN WITNESS WHEREOF, the parties hereto have executed this Eleventh Amended and Restated Investors' Rights Agreement as of the date first written above.

COMPANY:

TEMPUS LABS, INC.

By: /s/ Ryan Fukushima
Name: Ryan Fukushima
Title: Chief Operating Officer

IN WITNESS WHEREOF, the parties hereto have executed this Eleventh Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

SCOTTISH MORTGAGE INVESTMENT TRUST PLC

Executed for and on behalf of Scottish Mortgage Investment Trust plc, acting through its agent, Baillie Gifford & Co

By: /s/ Tom Slater
Name: Tom Slater
Title: Partner of Baillie Gifford & Co.

THE SCHIEHALLION FUND LIMITED

Executed for and on behalf of The Schiehallion Fund Limited, acting through its agent, Baillie Gifford Overseas Limited

By: /s/ Tom Slater
Name: Tom Slater
Title: Authorized Signatory of Baillie Gifford Overseas Limited

IN WITNESS WHEREOF, the parties hereto have executed this Eleventh Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

LINGOTTO ALTERNATIVE INVESTMENTS MASTER FUND ICAV on behalf of its subfund LINGOTTO INNOVATION MASTER FUND

By: /s/ James Anderson
Name: James Anderson
Title: Authorised signatory, Lingotto Investment Management LLP acting as Investment Manager

IN WITNESS WHEREOF, the parties hereto have executed this Eleventh Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

ARES CAPITAL CORPORATION

By: /s/ Michael Dieber
Name: Michael Dieber
Title: Authorized Signatory

ARES SFERS CREDIT STRATEGIES FUND LLC

By: Ares Capital Management LLC, its investment manager

By: /s/ Michael Dieber
Name: Michael Dieber
Title: Authorized Signatory

ASH HOLDINGS I (U), L.P.

By: Ares Capital Management, LLC, its Manager

By: /s/ Michael Dieber
Name: Michael Dieber
Title: Authorized Signatory

IN WITNESS WHEREOF, the parties hereto have executed this Eleventh Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

INNOVATION GROUP INVESTORS, L.P. – 2011 SERIES

By: Innovation Group, LLC, its General Partner

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

LIGHTBANK INVESTMENTS 1B, LLC

By: Lightbank, LLC, its Manager

By: /s/ Eric Lefkofksy
Name: Eric Lefkofsky
Title: Manager

INNOVATION GROUP INVESTORS, L.P. – SERIES 1B

By: Innovation Group, LLC, its General Partner

By: /s/ Eric Lefkofksy
Name: Eric Lefkofsky
Title: Manager

IN WITNESS WHEREOF, the parties hereto have executed this Eleventh Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

TEMPUS SERIES A INVESTMENTS, LLC

By: Lightbank, LLC, its Manager

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

TEMPUS SERIES B INVESTMENTS, LLC

By: Lightbank, LLC, its Manager

By: /s/ Eric Lefkofksy
Name: Eric Lefkofsky
Title: Manager

TEMPUS SERIES B-1 INVESTMENTS, LLC

By: Lightbank, LLC, its Manager

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

TEMPUS SERIES B-2 INVESTMENTS, LLC

By: Blue Media, LLC, its Manager

By: /s/ Eric Lefkofksy
Name: Eric Lefkofsky
Title: Manager

TEMPUS SERIES C INVESTMENTS, LLC

By: Blue Media, LLC, its Manager

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

TEMPUS SERIES D INVESTMENTS, LLC

By: Blue Media, LLC, its Manager

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

TEMPUS SERIES E INVESTMENTS, LLC

By: Blue Media, LLC, its Manager

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

TEMPUS SERIES G INVESTMENTS, LLC

By: Blue Media, LLC, its Manager

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

IN WITNESS WHEREOF, the parties hereto have executed this Eleventh Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTORS:

BLUE MEDIA, LLC

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

IN WITNESS WHEREOF, the parties hereto have executed this Eleventh Amended and Restated Investors' Rights Agreement as of the date first written above.

COMMON HOLDERS:

GRAY MEDIA, LLC

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

BLUE MEDIA, LLC

By: /s/ Eric Lefkofsky
Name: Eric Lefkofsky
Title: Manager

SCHEDULE A

Investors

Blue Media, LLC
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Eric Lefkofsky

Innovation Group Investors, L.P. – Series 2011
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Lightbank Investments 1B, LLC
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Innovation Group Investors, L.P. – Series 1B
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Highland Alternative III, LLC
GCM Progress, LLC
Winchester Partners LP
c/o Grosvenor Holdings, LLC
900 North Michigan Avenue
Suite 1100
Chicago, IL 60611
Attention: Michael Sacks/Adam Pollock

James and Wendy Abrams
405 Sheridan Road
Highland Park, IL 60035

Tempus Series A Investments, LLC
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Tempus Series B Investments, LLC
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Tempus Series B-1 Investments, LLC
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Tempus Series B-2 Investments, LLC
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Tempus Series C Investments, LLC
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Tempus Series D Investments, LLC
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Tempus Series E Investments, LLC
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

Tempus Series G Investments, LLC
c/o Lightbank
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Mike Mauceri

New Enterprise Associates 16, L.P.
1954 Greenspring Drive
Suite 600
Timonium, Maryland 21093
Attention: General Counsel

NEA Ventures 2017, L.P.
1954 Greenspring Drive
Suite 600
Timonium, Maryland 21093
Attention: General Counsel

T. Rowe Price New Horizons Fund, Inc.
T. Rowe Price New Horizons Trust
T. Rowe Price U.S. Equities Trust
MassMutual Select Funds - MassMutual Select T. Rowe Price Small and Mid Cap Blend Fund
T. Rowe Price Health Sciences Fund, Inc.
TD Mutual Funds - TD Health Sciences Fund
VALIC Company I - Science & Technology Fund
T. Rowe Price Health Sciences Portfolio
c/o T. Rowe Price Associates, Inc.
100 East Pratt Street
Baltimore, MD 21202
Attn: Andrew Baek, Vice President

Revolution Growth III, LP
1717 Rhode Island Ave. NW
Suite 1000
Washington, D.C. 20036
Attention: General Counsel

Praxitela Ventures LLC
751 Laurel Street, No. 717
San Carlos, California 94070
Attention: Barbara S. Hager
SFT Private Equity LLC (2016)

SCT 2018 LLC
John G. Searle Charitable Trusts Partnership
Frances C. Searle Charitable Trusts Partnership
KTC Alternatives Fund IV LLC
KTC Alternatives Fund V LLC
c/o Kinship Trust Company, LLC
225 West Washington, 28th Floor
Chicago, Illinois 60606
Attn: Chris Lucchetti

Scottish Mortgage Investment Trust plc
The Schiehallion Fund Limited
c/o Baillie Gifford & Co.
Calton Square, 1 Greenside Row
Edinburgh EH1 3AN
Scotland, the United Kingdom

Teacher Retirement System of Texas, a public pension fund and entity of the State of Texas
1000 Red River Street
Austin, Texas 78701-2698

Novo Holdings A/S
Tuborg Havnevej 19
DK-2900 Hellerup
Denmark
Attention: Robert Ghenchev

Franklin Strategic Series – Franklin Growth Opportunities Fund
Franklin Templeton Investment Funds – Franklin U.S. Opportunities Fund
Franklin Templeton Investment Funds – Franklin Technology Fund
One Franklin Parkway, Building 920
San Mateo, California 94403

RFG-Sunflower LLC
c/o RFG Financial Group, Inc.
1250 Fourth Street, 5th Floor
Santa Monica, CA 90401

RFG-Hazel LLC
c/o RFG Financial Group, Inc.
1250 Fourth Street, 5th Floor
Santa Monica, CA 90401

Google LLC
1600 Amphitheatre Parkway
Mountain View, California 94043
Attention:

Neuberger Berman Principal Strategies PRIMA Fund LP
Neuberger Berman Principal Strategies PRIMA Co-Invest Fund IV LP
PRIMA MLP Fund LP
SunBern Alternative Opportunities Fund LLC
190 S. LaSalle Street
24th Floor
Chicago, Illinois 60603

Lingotto Alternative Investments Master Fund ICAV on behalf of its subfund Lingotto Innovation Master Fund
2nd Floor, Block E, Iveagh Court
Harcourt Road
Dublin, D02 YT22
Ireland

Ares Capital Corporation
245 Park Avenue, 44th Floor
New York, NY 10167

Ares SFERS Credit Strategies Fund LLC
2000 Avenue of the Stars, Floor 12
Los Angeles, CA 90067

ASH Holdings I (U), L.P.
800 Corporate Pointe, Suite 400
Culver City, CA 90230

SCHEDULE B

Common Holders

Gray Media, LLC
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Eric Lefkofsky

Blue Media, LLC
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Eric Lefkofsky

Keeks, LLC
600 West Chicago Avenue
Suite 510
Chicago, IL 60654
Attn: Brad Keywell

RFG-Sunflower LLC
c/o RFG Financial Group, Inc.
1250 Fourth Street, 5th Floor
Santa Monica, CA 90401

RFG-Hazel LLC
c/o RFG Financial Group, Inc.
1250 Fourth Street, 5th Floor
Santa Monica, CA 90401

Exhibit A

Novo Side Letter

EXECUTIVE EMPLOYMENT AGREEMENT

This **EXECUTIVE EMPLOYMENT AGREEMENT** dated as of January 1, 2023 ("***Agreement***") is by and between **ERIK PHELPS** ("***Executive***") and **TEMPUS LABS, INC.** ("***Company***").

WHEREAS, the Company desires to employ Executive as Chief Legal and Administrative Officer and provide Executive with certain compensation and benefits in return for Executive's services, and Executive agrees to be employed by the Company in such capacity and to receive the compensation and benefits on the terms and conditions set forth herein; and

WHEREAS, the Company and Executive desire to enter into this Employment Agreement (the "***Agreement***") to become effective immediately, subject to Executive's signature below (the "***Effective Date***") in order to memorialize the terms and conditions of Executive's employment by the Company upon and following the Effective Date.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. Employment by the Company.

1.1 Position. Subject to the terms set forth herein, the Company agrees to employ Executive in the position of Chief Legal and Administrative Officer, and Executive hereby accepts such continued employment on the terms and conditions set forth in this Agreement.

1.2 Duties. As Chief Legal and Administrative Officer, Executive will report to the Chief Executive Officer (the "***CEO***") and such other individual(s) as assigned, performing such duties as are normally associated with Executive's position and such duties as are assigned to Executive from time to time, subject to the oversight and direction of the CEO. During the term of Executive's employment with the Company, Executive will work on a full-time basis for the Company and will devote Executive's best efforts and substantially all of Executive's business time and attention to the business of the Company. Executive shall perform Executive's duties under this Agreement principally out of the Company's facility in Chicago or in Madison, WI. In addition, Executive shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.3 Company Policies and Benefits. The employment relationship between the parties shall also be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Executive will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during Executive's employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

2. Compensation.

2.1 Salary. Executive shall receive for Executive's services to be rendered under this Agreement an initial base salary of **$610,000** on an annualized basis, subject to review and adjustment by the Company in its sole discretion, payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices ("***Base Salary***").

2.2 Equity Incentive Plan. During the term of Executive's employment with the Company, Executive will be eligible to participate in any then-current equity incentive plan as may be in effect from time to time and made available to similarly situated executive employees, subject to the terms of the associated plan documents and as determined by the Board of Directors of the Company (the "***Board***") in its sole discretion from time to time. The Company reserves the right to modify or terminate its incentive programs at any time in its sole discretion.

2.3 Expense Reimbursement. The Company will reimburse Executive for reasonable business expenses in accordance with the Company's standard expense reimbursement policy, as the same may be modified by the Company from time to time. The Company shall reimburse Executive for all customary and appropriate business-related expenses, including an agreed housing allowance, actually incurred and documented in accordance with Company policy, as in effect from time to time. For the avoidance of doubt, to the extent that any reimbursements payable to Executive are subject to the provisions of Section 409A of the Code: (a) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (b) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (c) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. Confidentiality, Intellectual Property, and Protective Covenants Agreement. As a condition of continued employment, Executive agreed to execute and abide by a Confidentiality, Intellectual Property, and Protective Covenants Agreement ("***Proprietary Information Agreement***"), which may be amended by the parties from time to time without regard to this Agreement. The Proprietary Information Agreement contains provisions that are intended by the parties to survive and do survive termination of this Agreement, and such terms are hereby incorporated by reference.

4. Outside Activities during Employment. Except with the prior written consent of the Board, including consent given to Executive prior to the signing of this Agreement, Executive will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Executive's responsibilities and the performance of Executive's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Executive may wish to serve, (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Executive's duties; and (iii) such other activities as may be specifically approved by the Board. This restriction shall not, however, preclude Executive (x) from owning less than one percent (1%) of the total outstanding shares of a publicly traded company, or (y) from employment or service in any capacity with Affiliates of the Company. As used in this Agreement, "***Affiliates***" means an entity under common management or control with the Company.

5. No Conflict with Existing Obligations. Executive represents that Executive's performance of all the terms of this Agreement does not and will not breach any agreement or obligation of any kind made prior to Executive's employment by the Company, including agreements or obligations Executive may have with prior employers or entities for which Executive has provided services. Executive has not entered into, and Executive agrees that Executive will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. Termination of Employment. The parties acknowledge that Executive's employment relationship with the Company is at-will, meaning either the Company or Executive may terminate Executive's employment at any time, with or without cause or advance notice. The provisions in this Section govern the amount of compensation, if any, to be provided to Executive upon termination of employment and do not alter this at-will status.

6.1 Termination without Cause or for Good Reason.

(a) The Company shall have the right to terminate Executive's employment with the Company pursuant to this **Section 6.1** at any time, in accordance with **Section 6.6**, without "Cause" (as defined in **Section 6.3(b)** below) by giving notice as described in **Section 7.1** of this Agreement. A termination pursuant to **Section 6.5** below is not a termination without "Cause" for purposes of receiving the benefits described in **Sections 6.1** or **Section 6.2**.

(b) If the Company terminates Executive's employment at any time without Cause or Executive terminates Executive's employment with the Company for Good Reason and provided that such termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), then Executive shall be entitled to receive the Accrued Obligations (defined below). If Executive complies with the obligations in **Section 6.1(c)** below, Executive shall also be eligible to receive the following "***Severance Benefits***":

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for twelve (12) months, less all applicable withholdings and deductions, paid in equal installments on the Company's normal payroll schedule following the termination date, with the first payment beginning on the Severance Pay Commencement Date (as defined in **Section 6.1(c)** below), and the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter; provided that on the Severance Pay Commencement Date, the Company will pay in a lump sum the aggregate amount of the cash severance payments that the Company would have paid Executive through such date had the payments commenced on the effective date of termination through the Severance Pay Commencement Date. In addition, during the six (6) month period following Executive's Separation from Service, Executive's equity will continue to satisfy any applicable time-based vesting condition, as though Executive remained employed by Company.

(c) If Executive timely elects continued coverage under COBRA for Executive and Executive's covered dependents under the Company's group health plans following such termination, then the Company shall pay the COBRA premiums necessary to continue Executive's and Executive's covered dependents' health insurance coverage in effect for

Executive (and Executive's covered dependents) on the termination date until the earliest of: (i) twelve (12) months following the termination date (the "***COBRA Severance Period***"); (ii) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (iii) the date Executive ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), (the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding (such amount, the "***Special Severance Payment***"), for the remainder of the COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company. Executive will be paid all of the Accrued Obligations on the Company's first payroll date after Executive's date of termination from employment or earlier if required by law. Executive shall receive the Severance Benefits pursuant to **Section 6.1(b)** or the Change in Control Severance Benefits (defined below) pursuant to **6.2(a)** of this Agreement, as applicable, if: (i) Executive executes and does not revoke a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in a form acceptable to the Company (the "***Release***") and the Release is enforceable and effective as provided in the Release on or before the date that is the sixtieth (60th) day following the effective date of termination (such 60th day, the "***Severance Pay Commencement Date***"); (ii) if Executive holds any other positions with the Company, Executive resigns such position(s) to be effective no later than the date of Executive's termination date (or such other date as requested by the Board); (iii) Executive returns all Company property; (iv) Executive complies with Executive's post-termination obligations under this Agreement and the Proprietary Information Agreement; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in Release.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Executive's accrued but unpaid salary through the date of termination, (ii) any unreimbursed business expenses incurred by Executive payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Executive under any qualified retirement plan or health and welfare benefit plan in which Executive was a participant in accordance with applicable law and the provisions of such plan.

(e) The Severance Benefits provided to Executive pursuant to this **Section 6.1** are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy or program.

(f) Any damages caused by the termination of Executive's employment without Cause would be difficult to ascertain; therefore, the Severance Benefits for which Executive is eligible pursuant to **Section 6.1(b)** above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Executive's consent: (i) a material reduction in Executive's Base Salary of at least 25%; (ii) a material breach of this Agreement by the Company; (iii) a material reduction in the Executive's duties, authority and responsibilities relative to the Executive's duties, authority, and responsibilities in effect immediately prior to such reduction (provided that a material reduction of duties, authority and responsibilities will not be deemed to have occurred if, in connection with a Change in Control, Executive is not reporting to the individual in the same role as Executive's prior manager at the acquirer or any other top-tier holding company above the acquirer); or (iv) the relocation of Executive's principal place of employment, without Executive's consent, in a manner that lengthens Executive's one-way commute distance by fifty (50) or more miles from his then-current principal place of employment immediately prior to such relocation; *provided, however,* that, any such termination by Executive shall only be deemed for Good Reason pursuant to this definition if: (1) Executive gives the Company written notice of his intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that Executive believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); and (3) Executive voluntarily terminates Executive's employment within thirty (30) days following the end of the Cure Period.

6.2 Termination without Cause or for Good Reason Coincident with a Change in Control.

(a) If Executive's employment by the Company is terminated by the Company or any successor entity without Cause (and not due to Disability or death) or by Executive for Good Reason within two (2) months prior to or within twelve (12) months following the effective date of a "***Change in Control***" (as defined in the Company's Amended and Restated 2015 Stock Plan, as such plan may be amended from time to time (the "***2015 Plan***")), provided that such termination constitutes a Separation from Service, without regard to any alternative definition thereunder, then in addition to paying or providing Executive with the Accrued Obligations and the Severance Benefits available under **Section 6.1**, the Company will provide the following "***Change in Control Severance Benefits***":

(i) Any equity awards held by Executive that were issued pursuant to the Company's 2015 Plan or any successor plan and that remain outstanding and are unvested as of the date of such termination will immediately vest in full. For the avoidance of doubt, if such termination occurs prior to the effective date of a Change in Control, any such equity awards will remain outstanding following the date of such termination as necessary to give effect to the potential vesting acceleration set forth in this **Section 6.2(a)(iv)**, which would occur contingent upon the consummation of a Change in Control.

6.3 Termination by the Company for Cause.

(a) The Company shall have the right to terminate Executive's employment with the Company at any time, in accordance with **Section 6.6**, for Cause by giving notice as described in **Section 7.1** of this Agreement. In the event Executive's employment is terminated at any time for Cause, Executive will not receive Severance Benefits, Change in Control Severance Benefits, or any other severance compensation or benefits, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Executive the Accrued Obligations.

(b) ***"Cause"*** for termination shall mean that the Company has determined in its sole discretion that Executive has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, falsification of any documents or records, or immoral or disreputable conduct; (iii) any conduct which constitutes a felony or other criminal act involving corruption, misappropriation, or moral turpitude, or otherwise impairs your ability to perform your duties with the Company, under applicable law; (iv) material violation of any Company policy or any act of misconduct (including if Executive acts in a manner expected to have a material detrimental effect on the Company's reputation or business); (v) refusal to follow or implement a clear and reasonable directive of Company; (vi) negligence or incompetence in the performance of Executive's duties or failure to perform such duties in a manner satisfactory to the Company after the expiration of ten (10) days without cure after written notice of such failure; (vii) breach of fiduciary duty; or (viii) unauthorized use, misappropriation, destruction, or diversion of any tangible or intangible asset or corporate opportunity of the Company.

6.4 Resignation by Executive.

(a) Executive may resign from Executive's employment with the Company at any time, in accordance with **Section 6.6**, by giving notice as described in **Section 7.1**.

(b) In the event Executive resigns from Executive's employment with the Company for any reason other than Good Reason in accordance with **Sections 6.1 or 6.2**, Executive will not receive Severance Benefits, Change in Control Severance Benefits, or any other severance compensation or benefits, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Executive the Accrued Obligations.

6.5 Termination by Virtue of Death or Disability of Executive.

(a) In the event of Executive's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, in accordance with **Section 6.6**, and the Company shall, pursuant to the Company's standard payroll policies, pay to Executive's legal representatives all Accrued Obligations.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to Executive, and in accordance with **Section 6.6**, to terminate this Agreement based on Executive's Disability. Termination by the Company of Executive's employment based on "***Disability***" shall mean termination because Executive is unable due to a physical or mental condition to perform the essential functions of his position with

or without reasonable accommodation for 180 days in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Executive's employment is terminated based on Executive's Disability, Executive will not receive Severance Benefits, Change in Control Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Executive the Accrued Obligations.

6.6 Notice; Effective Date of Termination.

(a) Termination of Executive's employment pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Executive of Executive's termination, with or without Cause, unless pursuant to Section 6.3(b)(vi) in which case ten (10) days after notice if not cured or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon the Executive's death;

(iii) ten (10) days after the Company gives notice to Executive of Executive's termination on account of Executive's Disability, unless the Company specifies a later date, in which case, termination shall be effective as of such later date, *provided* that Executive has not returned to the full-time performance of Executive's duties prior to such date;

(iv) ten (10) days after the Executive gives written notice to the Company of Executive's resignation, *provided* that the Company may set a termination date at any time between the date of notice and the date of resignation, in which case the Executive's resignation shall be effective as of such other date. Executive will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Executive's full satisfaction of the requirements of **Section 6.1(g)**.

(b) In the event notice of a termination under subsections (a)(i) or (iii) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of **Section 7.1** below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation with Company after Termination of Employment. Following termination of Executive's employment for any reason, Executive agrees to cooperate fully with the Company in connection with its actual or contemplated defense, prosecution, or investigation of any claims or demands by or against third parties, or other matters arising from events, acts, or failures to act that occurred during the period of Executive's employment by the Company. Such cooperation includes, without limitation, making Executive available to the

Company upon reasonable notice, without subpoena, to provide complete, truthful and accurate information in witness interviews, depositions and trial testimony, and the failure to provide complete, truthful, and accurate information shall be a material breach of this Agreement and a basis for rescinding or forfeiting the benefits described herein. In addition, for twelve (12) months after Executive's employment with the Company ends for any reason, Executive agrees to cooperate fully with the Company in all matters relating to the transition of Executive's work and responsibilities on behalf of the Company, including, but not limited to, any present, prior or subsequent relationships and the orderly transfer of any such work and institutional knowledge to such other persons as may be designated by the Company. The Company will reimburse Executive for reasonable out-of-pocket expenses Executive incurs in connection with any such cooperation (excluding forgone wages, salary, or other compensation) and will make reasonable efforts to accommodate Executive's scheduling needs.

6.8 Application of Section 409A. It is intended that all of the severance payments payable under this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Section 409A of the Code and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") provided under Treasury Regulations Sections 1.409A-1(b)(4) and 1.409A-1(b)(9), and this Agreement will be construed in a manner that complies with Section 409A. If not so exempt, this Agreement (and any definitions hereunder) will be construed in a manner that complies with Section 409A and incorporates by reference all required definitions and payment terms. No severance payments will be made under this Agreement unless Executive's termination of employment constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h)). For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulations Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement (whether severance payments or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment. If the Company determines that the severance benefits provided under this Agreement constitutes "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company, as such term is defined in Section 409A(a)(2)(B)(i) of the Code at the time of Executive's Separation from Service, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the Severance will be delayed as follows: on the earlier to occur of (a) the date that is six months and one day after Executive's Separation from Service, and (b) the date of Executive's death (such earlier date, the "***Delayed Initial Payment Date***"), the Company will (i) pay to Executive a lump sum amount equal to the sum of the severance benefits that Executive would otherwise have received through the Delayed Initial Payment Date if the commencement of the payment of the severance benefits had not been delayed pursuant to this Section 6.8 and (ii) commence paying the balance of the severance benefits in accordance with the applicable payment schedule set forth in Section 6. No interest shall be due on any amounts deferred pursuant to this Section 6.8. To the extent that any Severance Benefits are deferred compensation under Section 409A of the Code and are not otherwise exempt from the application of Section 409A, then, if the period during which Executive may consider and sign the Release spans two calendar years, the payment of any such Severance Benefit will not be made or begin until the later calendar year.

6.9 Section 280G. Notwithstanding any other provision of this Agreement to the contrary, if payments made or benefits provided pursuant to this Agreement or otherwise from the Company or any person or entity are considered "parachute payments" under Section 280G of the Code, then such parachute payments will be limited to the greatest amount that may be paid to Executive under Section 280G of the Code without causing any loss of deduction to the Company Group under such section, but only if, by reason of such reduction, the net after tax benefit to Executive will exceed the net after tax benefit if such reduction were not made. "***Net after tax benefit***" for purposes of this Agreement will mean the sum of (i) the total amounts payable to the Executive under this Agreement, plus (ii) all other payments and benefits which the Executive receives or then is entitled to receive from the Company or otherwise that would constitute a "parachute payment" within the meaning of Section 280G of the Code, less (iii) the amount of federal and state income taxes payable with respect to the foregoing calculated at the maximum marginal income tax rate for each year in which the foregoing will be paid to Executive (based upon the rate in effect for such year as set forth in the Code at the time of termination of Executive's employment), less (iv) the amount of excise taxes imposed with respect to the payments and benefits described in (i) and (ii) above by Section 4999 of the Code. The determination as to whether and to what extent payments are required to be reduced in accordance with this Section 6.9 will be made at the Company's expense by a nationally recognized certified public accounting firm as may be designated by the Company prior to a change in control (the "***Accounting Firm***"). In the event of any mistaken underpayment or overpayment under this Agreement, as determined by the Accounting Firm, the amount of such underpayment or overpayment will forthwith be paid to Executive or refunded to the Company, as the case may be, with interest at one hundred twenty (120%) of the applicable Federal rate provided for in Section 7872(f)(2) of the Code. Any reduction in payments required by this Section 6.9 will occur in the following order: (1) any cash severance, (2) any other cash amount payable to Executive, (3) any benefit valued as a "parachute payment," (4) the acceleration of vesting of any equity awards that are options, and (5) the acceleration of vesting of any other equity awards. Within any such category of payments and benefits, a reduction will occur first with respect to amounts that are not "deferred compensation" within the meaning of Section 409A and then with respect to amounts that are. In the event that acceleration of compensation from equity awards is to be reduced, such acceleration of vesting will be canceled, subject to the immediately preceding sentence, in the reverse order of the date of grant.

7. General Provisions.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Executive at either Executive's address as listed on the Company payroll, or Executive's Company-issued email address, or at such other address as the Company or Executive may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Survival. Provisions of this Agreement which by their terms must survive the termination of this Agreement in order to effectuate the intent of the parties will survive any such termination for such period as may be appropriate under the circumstances.

7.4 Waiver. If either party should waive any breach of any provisions of this Agreement, it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.5 Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the Prior Agreement. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Executive and an authorized officer of the Company. The parties have entered into a separate Proprietary Information Agreement and have or may enter into separate agreements related to equity. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of Executive's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.6 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement. The parties agree that facsimile and scanned image copies of signatures will suffice as original signatures.

7.7 Withholding Taxes. The Company will be entitled to withhold from any payment due to Executive hereunder any amounts required to be withheld by applicable tax laws or regulations.

7.8 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.9 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. Executive may not assign or transfer this Agreement or any rights or obligations hereunder, other than to his estate upon his death.

7.10 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the laws of the State of Delaware.

7.11 Dispute Resolution. The parties recognize that litigation in federal or state courts or before federal or state administrative agencies of disputes arising out of the Executive's employment with the Company or out of this Agreement, or the Executive's termination of employment or termination of this Agreement, may not be in the best interests of either the Executive or the Company, and may result in unnecessary costs, delays, complexities, and uncertainty. The parties agree that any dispute between the parties arising out of or relating to the negotiation, execution, performance or termination of this Agreement or the Executive's employment, including, but not limited to, any claim arising out of this Agreement, claims under Title VII of the Civil Rights Act of 1964, as amended, the Civil Rights Act of 1991, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, Section 1981 of the Civil Rights Act of 1966, as amended, the Family Medical Leave Act, the Executive Retirement Income Security Act, and any similar federal, state or local law, statute, regulation, or any common law doctrine, whether that dispute arises during or after employment, shall be settled by binding arbitration in accordance with the National Rules for the Resolution of Employment Disputes of the American Arbitration Association; *provided however,* that this dispute resolution provision shall not apply to any separate agreements between the parties that do not themselves specify arbitration as an exclusive remedy. The location for the arbitration shall be the Chicago, Illinois area. Any award made by such panel shall be final, binding and conclusive on the parties for all purposes, and judgment upon the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The arbitrators' fees and expenses and all administrative fees and expenses associated with the filing of the arbitration shall be borne by the Company; *provided however*, that at the Executive's option, Executive may voluntarily pay up to one-half the costs and fees. The parties acknowledge and agree that their obligations to arbitrate under this Section survive the termination of this Agreement and continue after the termination of the employment relationship between Executive and the Company. The parties each further agree that the arbitration provisions of this Agreement shall provide each party with its **exclusive remedy**, and each party expressly waives any right it might have to seek redress in any other forum, except as otherwise expressly provided in this Agreement. By electing arbitration as the means for final settlement of all claims, **the parties hereby waive their respective rights to, and agree not to, sue each other in any action in a Federal, State or local court with respect to such claims, but may seek to enforce in court an arbitration award rendered pursuant to this Agreement. The parties specifically agree to waive their respective rights to a trial by jury, and further agree that no demand, request or motion will be made for trial by jury.**

[SIGNATURES TO FOLLOW ON NEXT PAGE]

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

TEMPUS LABS, INC.

By: /s/ Andy Polovin
Name: Andy Polovin
Title: General Counsel

EXECUTIVE

/s/ Erik Phelps
Erik Phelps

EXECUTIVE EMPLOYMENT AGREEMENT

This **EXECUTIVE EMPLOYMENT AGREEMENT** dated as of January 1, 2023 ("***Agreement***") is by and between **RYAN FUKUSHIMA** ("***Executive***") and **TEMPUS LABS, INC.** ("***Company***").

WHEREAS, the Company desires to employ Executive as Chief Operating Officer and provide Executive with certain compensation and benefits in return for Executive's services, and Executive agrees to be employed by the Company in such capacity and to receive the compensation and benefits on the terms and conditions set forth herein; and

WHEREAS, the Company and Executive desire to enter into this Employment Agreement (the "***Agreement***") to become effective immediately, subject to Executive's signature below (the "***Effective Date***") in order to memorialize the terms and conditions of Executive's employment by the Company upon and following the Effective Date.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. Employment by the Company.

1.1 Position. Subject to the terms set forth herein, the Company agrees to employ Executive in the position of Chief Operating Officer, or such other title as may be designated by the CEO, hereby accepts such continued employment on the terms and conditions set forth in this Agreement.

1.2 Duties. As Chief Operating Officer (or such other title), Executive will report to the Chief Executive Officer (the "***CEO***") and such other individual(s) as assigned, performing such duties as are normally associated with Executive's position and such duties as are assigned to Executive from time to time, subject to the oversight and direction of the CEO. During the term of Executive's employment with the Company, Executive will work on a full-time basis for the Company and will devote Executive's best efforts and substantially all of Executive's business time and attention to the business of the Company. Executive shall perform Executive's duties under this Agreement principally out of the Company's facility in Chicago. In addition, Executive shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.3 Company Policies and Benefits. The employment relationship between the parties shall also be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Executive will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during Executive's employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

2. Compensation.

2.1 Salary. Executive shall receive for Executive's services to be rendered under this Agreement an initial base salary of **$375,000** on an annualized basis, which represents a 50 percent proration based on the amount of time subject to outside activities, subject to review and adjustment by the Company in its sole discretion, payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices ("***Base Salary***").

2.2 Equity Incentive Plan. During the term of Executive's employment with the Company, Executive will be eligible to participate in any then-current equity incentive plan as may be in effect from time to time and made available to similarly situated executive employees, subject to the terms of the associated plan documents and as determined by the Board of Directors of the Company (the "***Board***") in its sole discretion from time to time. The Company reserves the right to modify or terminate its incentive programs at any time in its sole discretion.

2.3 Expense Reimbursement. The Company will reimburse Executive for reasonable business expenses in accordance with the Company's standard expense reimbursement policy, as the same may be modified by the Company from time to time. The Company shall reimburse Executive for all customary and appropriate business-related expenses actually incurred and documented in accordance with Company policy, as in effect from time to time. For the avoidance of doubt, to the extent that any reimbursements payable to Executive are subject to the provisions of Section 409A of the Code: (a) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (b) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (c) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. Confidentiality, Intellectual Property, and Protective Covenants Agreement. As a condition of continued employment, Executive agreed to execute and abide by a Confidentiality, Intellectual Property, and Protective Covenants Agreement ("***Proprietary Information Agreement***"), which may be amended by the parties from time to time without regard to this Agreement. The Proprietary Information Agreement contains provisions that are intended by the parties to survive and do survive termination of this Agreement, and such terms are hereby incorporated by reference.

4. Outside Activities during Employment. The parties acknowledge and agree that Executive is also a co-founder and serves as interim Chief Executive Officer of Pathos AI, Inc., an AI-enabled drug development company that has entered into an agreement with the Company. The Company acknowledges and agrees that Executive will devote between approximately 50 and 75 percent of professional activities to the Company and the remaining percent to Pathos. Executive's base salary has been adjusted to reflect this time commitment. Such percentages and base salary may be adjusted from time to time by the Company depending upon the percentage of professional activities devoted to the Company, and such base salary shall reflect the proportionate amount of activities devoted to the Company.

5. No Conflict with Existing Obligations. Executive represents that Executive's performance of all the terms of this Agreement does not and will not breach any agreement or obligation of any kind made prior to Executive's employment by the Company, including agreements or obligations Executive may have with prior employers or entities for which Executive has provided services. Executive has not entered into, and Executive agrees that Executive will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. Termination of Employment. The parties acknowledge that Executive's employment relationship with the Company is at-will, meaning either the Company or Executive may terminate Executive's employment at any time, with or without cause or advance notice. The provisions in this Section govern the amount of compensation, if any, to be provided to Executive upon termination of employment and do not alter this at-will status.

6.1 Termination without Cause or for Good Reason.

(a) The Company shall have the right to terminate Executive's employment with the Company pursuant to this **Section 6.1** at any time, in accordance with **Section 6.6**, without "Cause" (as defined in **Section 6.3(b)** below) by giving notice as described in **Section 7.1** of this Agreement. A termination pursuant to **Section 6.5** below is not a termination without "Cause" for purposes of receiving the benefits described in **Sections 6.1** or **Section 6.2**.

(b) If the Company terminates Executive's employment at any time without Cause or Executive terminates Executive's employment with the Company for Good Reason and provided that such termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), then Executive shall be entitled to receive the Accrued Obligations (defined below). If Executive complies with the obligations in **Section 6.1(c)** below, Executive shall also be eligible to receive the following "***Severance Benefits***":

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for twelve (12) months, less all applicable withholdings and deductions, paid in equal installments on the Company's normal payroll schedule following the termination date, with the first payment beginning on the Severance Pay Commencement Date (as defined in **Section 6.1(c)** below), and the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter; provided that on the Severance Pay Commencement Date, the Company will pay in a lump sum the aggregate amount of the cash severance payments that the Company would have paid Executive through such date had the payments commenced on the effective date of termination through the Severance Pay Commencement Date. In addition, during the six (6) month period following Executive's Separation from Service, Executive's equity will continue to satisfy any applicable time-based vesting condition, as though Executive remained employed by Company.

(c) If Executive timely elects continued coverage under COBRA for Executive and Executive's covered dependents under the Company's group health plans following such termination, then the Company shall pay the COBRA premiums necessary to continue Executive's and Executive's covered dependents' health insurance coverage in effect for Executive (and Executive's covered dependents) on the termination date until the earliest of: (i) twelve (12) months following the termination date (the "***COBRA Severance Period***"); (ii) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (iii) the date Executive ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), (the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding (such amount, the "***Special Severance Payment***"), for the remainder of the COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company. Executive will be paid all of the Accrued Obligations on the Company's first payroll date after Executive's date of termination from employment or earlier if required by law. Executive shall receive the Severance Benefits pursuant to **Section 6.1(b)** or the Change in Control Severance Benefits (defined below) pursuant to **6.2(a)** of this Agreement, as applicable, if: (i) Executive executes and does not revoke a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in a form acceptable to the Company (the "***Release***") and the Release is enforceable and effective as provided in the Release on or before the date that is the sixtieth (60th) day following the effective date of termination (such 60th day, the "***Severance Pay Commencement Date***"); (ii) if Executive holds any other positions with the Company, Executive resigns such position(s) to be effective no later than the date of Executive's termination date (or such other date as requested by the Board); (iii) Executive returns all Company property; (iv) Executive complies with Executive's post-termination obligations under this Agreement and the Proprietary Information Agreement; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in Release.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Executive's accrued but unpaid salary through the date of termination, (ii) any unreimbursed business expenses incurred by Executive payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Executive under any qualified retirement plan or health and welfare benefit plan in which Executive was a participant in accordance with applicable law and the provisions of such plan.

(e) The Severance Benefits provided to Executive pursuant to this **Section 6.1** are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy or program.

(f) Any damages caused by the termination of Executive's employment without Cause would be difficult to ascertain; therefore, the Severance Benefits for which Executive is eligible pursuant to **Section 6.1(b)** above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Executive's consent: (i) a material reduction in Executive's Base Salary of at least 25%; (ii) a material breach of this Agreement by the Company; (iii) a material reduction in the Executive's duties, authority and responsibilities relative to the Executive's duties, authority, and responsibilities in effect immediately prior to such reduction (provided that a material reduction of duties, authority and responsibilities will not be deemed to have occurred if, in connection with a Change in Control, Executive is not reporting to the individual in the same role as Executive's prior manager at the acquirer or any other top-tier holding company above the acquirer); or (iv) the relocation of Executive's principal place of employment, without Executive's consent, in a manner that lengthens Executive's one-way commute distance by fifty (50) or more miles from his then-current principal place of employment immediately prior to such relocation; *provided, however,* that, any such termination by Executive shall only be deemed for Good Reason pursuant to this definition if: (1) Executive gives the Company written notice of his intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that Executive believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); and (3) Executive voluntarily terminates Executive's employment within thirty (30) days following the end of the Cure Period.

6.2 Termination without Cause or for Good Reason Coincident with a Change in Control.

(a) If Executive's employment by the Company is terminated by the Company or any successor entity without Cause (and not due to Disability or death) or by Executive for Good Reason within two (2) months prior to or within twelve (12) months following the effective date of a "***Change in Control***" (as defined in the Company's Amended and Restated 2015 Stock Plan, as such plan may be amended from time to time (the "***2015 Plan***")), provided that such termination constitutes a Separation from Service, without regard to any alternative definition thereunder, then in addition to paying or providing Executive with the Accrued Obligations and the Severance Benefits available under **Section 6.1**, the Company will provide the following "***Change in Control Severance Benefits***":

(i) Any equity awards held by Executive that were issued pursuant to the Company's 2015 Plan or any successor plan and that remain outstanding and are unvested as of the date of such termination will immediately vest in full. For the avoidance of doubt, if such termination occurs prior to the effective date of a Change in Control, any such equity awards will remain outstanding following the date of such termination as necessary to give effect to the potential vesting acceleration set forth in this **Section 6.2(a)(iv)**, which would occur contingent upon the consummation of a Change in Control.

6.3 Termination by the Company for Cause.

(a) The Company shall have the right to terminate Executive's employment with the Company at any time, in accordance with **Section 6.6**, for Cause by giving notice as described in **Section 7.1** of this Agreement. In the event Executive's employment is terminated at any time for Cause, Executive will not receive Severance Benefits, Change in Control Severance Benefits, or any other severance compensation or benefits, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Executive the Accrued Obligations.

(b) ***"Cause"*** for termination shall mean that the Company has determined in its sole discretion that Executive has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, falsification of any documents or records, or immoral or disreputable conduct; (iii) any conduct which constitutes a felony or other criminal act involving corruption, misappropriation, or moral turpitude, or otherwise impairs your ability to perform your duties with the Company, under applicable law; (iv) material violation of any Company policy or any act of misconduct (including if Executive acts in a manner expected to have a material detrimental effect on the Company's reputation or business); (v) refusal to follow or implement a clear and reasonable directive of Company; (vi) negligence or incompetence in the performance of Executive's duties or failure to perform such duties in a manner satisfactory to the Company after the expiration of ten (10) days without cure after written notice of such failure; (vii) breach of fiduciary duty; or (viii) unauthorized use, misappropriation, destruction, or diversion of any tangible or intangible asset or corporate opportunity of the Company.

6.4 Resignation by Executive.

(a) Executive may resign from Executive's employment with the Company at any time, in accordance with **Section 6.6**, by giving notice as described in **Section 7.1**.

(b) In the event Executive resigns from Executive's employment with the Company for any reason other than Good Reason in accordance with **Sections 6.1 or 6.2**, Executive will not receive Severance Benefits, Change in Control Severance Benefits, or any other severance compensation or benefits, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Executive the Accrued Obligations.

6.5 Termination by Virtue of Death or Disability of Executive.

(a) In the event of Executive's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, in accordance with **Section 6.6**, and the Company shall, pursuant to the Company's standard payroll policies, pay to Executive's legal representatives all Accrued Obligations.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to Executive, and in accordance with **Section 6.6**, to terminate this Agreement based on Executive's Disability. Termination by the Company of Executive's employment based on "***Disability***" shall mean termination because Executive is unable due to a physical or mental condition to perform the essential functions of his position with

or without reasonable accommodation for 180 days in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Executive's employment is terminated based on Executive's Disability, Executive will not receive Severance Benefits, Change in Control Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Executive the Accrued Obligations.

6.6 Notice; Effective Date of Termination.

(a) Termination of Executive's employment pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Executive of Executive's termination, with or without Cause, unless pursuant to Section 6.3(b)(vi) in which case ten (10) days after notice if not cured or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon the Executive's death;

(iii) ten (10) days after the Company gives notice to Executive of Executive's termination on account of Executive's Disability, unless the Company specifies a later date, in which case, termination shall be effective as of such later date, *provided* that Executive has not returned to the full-time performance of Executive's duties prior to such date;

(iv) ten (10) days after the Executive gives written notice to the Company of Executive's resignation, *provided* that the Company may set a termination date at any time between the date of notice and the date of resignation, in which case the Executive's resignation shall be effective as of such other date. Executive will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Executive's full satisfaction of the requirements of **Section 6.1(g)**.

(b) In the event notice of a termination under subsections (a)(i) or (iii) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of **Section 7.1** below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation with Company after Termination of Employment. Following termination of Executive's employment for any reason, Executive agrees to cooperate fully with the Company in connection with its actual or contemplated defense, prosecution, or investigation of any claims or demands by or against third parties, or other matters arising from events, acts, or failures to act that occurred during the period of Executive's employment by the Company. Such cooperation includes, without limitation, making Executive available to the

Company upon reasonable notice, without subpoena, to provide complete, truthful and accurate information in witness interviews, depositions and trial testimony, and the failure to provide complete, truthful, and accurate information shall be a material breach of this Agreement and a basis for rescinding or forfeiting the benefits described herein. In addition, for twelve (12) months after Executive's employment with the Company ends for any reason, Executive agrees to cooperate fully with the Company in all matters relating to the transition of Executive's work and responsibilities on behalf of the Company, including, but not limited to, any present, prior or subsequent relationships and the orderly transfer of any such work and institutional knowledge to such other persons as may be designated by the Company. The Company will reimburse Executive for reasonable out-of-pocket expenses Executive incurs in connection with any such cooperation (excluding forgone wages, salary, or other compensation) and will make reasonable efforts to accommodate Executive's scheduling needs.

6.8 Application of Section 409A. It is intended that all of the severance payments payable under this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Section 409A of the Code and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") provided under Treasury Regulations Sections 1.409A-1(b)(4) and 1.409A-1(b)(9), and this Agreement will be construed in a manner that complies with Section 409A. If not so exempt, this Agreement (and any definitions hereunder) will be construed in a manner that complies with Section 409A and incorporates by reference all required definitions and payment terms. No severance payments will be made under this Agreement unless Executive's termination of employment constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h)). For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulations Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement (whether severance payments or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment. If the Company determines that the severance benefits provided under this Agreement constitutes "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company, as such term is defined in Section 409A(a)(2)(B)(i) of the Code at the time of Executive's Separation from Service, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the Severance will be delayed as follows: on the earlier to occur of (a) the date that is six months and one day after Executive's Separation from Service, and (b) the date of Executive's death (such earlier date, the "***Delayed Initial Payment Date***"), the Company will (i) pay to Executive a lump sum amount equal to the sum of the severance benefits that Executive would otherwise have received through the Delayed Initial Payment Date if the commencement of the payment of the severance benefits had not been delayed pursuant to this Section 6.8 and (ii) commence paying the balance of the severance benefits in accordance with the applicable payment schedule set forth in Section 6. No interest shall be due on any amounts deferred pursuant to this Section 6.8. To the extent that any Severance Benefits are deferred compensation under Section 409A of the Code and are not otherwise exempt from the application of Section 409A, then, if the period during which Executive may consider and sign the Release spans two calendar years, the payment of any such Severance Benefit will not be made or begin until the later calendar year.

6.9 Section 280G. Notwithstanding any other provision of this Agreement to the contrary, if payments made or benefits provided pursuant to this Agreement or otherwise from the Company or any person or entity are considered "parachute payments" under Section 280G of the Code, then such parachute payments will be limited to the greatest amount that may be paid to Executive under Section 280G of the Code without causing any loss of deduction to the Company Group under such section, but only if, by reason of such reduction, the net after tax benefit to Executive will exceed the net after tax benefit if such reduction were not made. "***Net after tax benefit***" for purposes of this Agreement will mean the sum of (i) the total amounts payable to the Executive under this Agreement, plus (ii) all other payments and benefits which the Executive receives or then is entitled to receive from the Company or otherwise that would constitute a "parachute payment" within the meaning of Section 280G of the Code, less (iii) the amount of federal and state income taxes payable with respect to the foregoing calculated at the maximum marginal income tax rate for each year in which the foregoing will be paid to Executive (based upon the rate in effect for such year as set forth in the Code at the time of termination of Executive's employment), less (iv) the amount of excise taxes imposed with respect to the payments and benefits described in (i) and (ii) above by Section 4999 of the Code. The determination as to whether and to what extent payments are required to be reduced in accordance with this Section 6.9 will be made at the Company's expense by a nationally recognized certified public accounting firm as may be designated by the Company prior to a change in control (the "***Accounting Firm***"). In the event of any mistaken underpayment or overpayment under this Agreement, as determined by the Accounting Firm, the amount of such underpayment or overpayment will forthwith be paid to Executive or refunded to the Company, as the case may be, with interest at one hundred twenty (120%) of the applicable Federal rate provided for in Section 7872(f)(2) of the Code. Any reduction in payments required by this Section 6.9 will occur in the following order: (1) any cash severance, (2) any other cash amount payable to Executive, (3) any benefit valued as a "parachute payment," (4) the acceleration of vesting of any equity awards that are options, and (5) the acceleration of vesting of any other equity awards. Within any such category of payments and benefits, a reduction will occur first with respect to amounts that are not "deferred compensation" within the meaning of Section 409A and then with respect to amounts that are. In the event that acceleration of compensation from equity awards is to be reduced, such acceleration of vesting will be canceled, subject to the immediately preceding sentence, in the reverse order of the date of grant.

7. General Provisions.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Executive at either Executive's address as listed on the Company payroll, or Executive's Company-issued email address, or at such other address as the Company or Executive may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Survival. Provisions of this Agreement which by their terms must survive the termination of this Agreement in order to effectuate the intent of the parties will survive any such termination for such period as may be appropriate under the circumstances.

7.4 Waiver. If either party should waive any breach of any provisions of this Agreement, it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.5 Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the Prior Agreement. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Executive and an authorized officer of the Company. The parties have entered into a separate Proprietary Information Agreement and have or may enter into separate agreements related to equity. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of Executive's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.6 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement. The parties agree that facsimile and scanned image copies of signatures will suffice as original signatures.

7.7 Withholding Taxes. The Company will be entitled to withhold from any payment due to Executive hereunder any amounts required to be withheld by applicable tax laws or regulations.

7.8 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.9 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. Executive may not assign or transfer this Agreement or any rights or obligations hereunder, other than to his estate upon his death.

7.10 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the laws of the State of Delaware.

7.11 Dispute Resolution. The parties recognize that litigation in federal or state courts or before federal or state administrative agencies of disputes arising out of the Executive's employment with the Company or out of this Agreement, or the Executive's termination of employment or termination of this Agreement, may not be in the best interests of either the Executive or the Company, and may result in unnecessary costs, delays, complexities, and uncertainty. The parties agree that any dispute between the parties arising out of or relating to the negotiation, execution, performance or termination of this Agreement or the Executive's employment, including, but not limited to, any claim arising out of this Agreement, claims under Title VII of the Civil Rights Act of 1964, as amended, the Civil Rights Act of 1991, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, Section 1981 of the Civil Rights Act of 1966, as amended, the Family Medical Leave Act, the Executive Retirement Income Security Act, and any similar federal, state or local law, statute, regulation, or any common law doctrine, whether that dispute arises during or after employment, shall be settled by binding arbitration in accordance with the National Rules for the Resolution of Employment Disputes of the American Arbitration Association; *provided however,* that this dispute resolution provision shall not apply to any separate agreements between the parties that do not themselves specify arbitration as an exclusive remedy. The location for the arbitration shall be the Chicago, Illinois area. Any award made by such panel shall be final, binding and conclusive on the parties for all purposes, and judgment upon the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The arbitrators' fees and expenses and all administrative fees and expenses associated with the filing of the arbitration shall be borne by the Company; *provided however*, that at the Executive's option, Executive may voluntarily pay up to one-half the costs and fees. The parties acknowledge and agree that their obligations to arbitrate under this Section survive the termination of this Agreement and continue after the termination of the employment relationship between Executive and the Company. The parties each further agree that the arbitration provisions of this Agreement shall provide each party with its **exclusive remedy**, and each party expressly waives any right it might have to seek redress in any other forum, except as otherwise expressly provided in this Agreement. By electing arbitration as the means for final settlement of all claims, **the parties hereby waive their respective rights to, and agree not to, sue each other in any action in a Federal, State or local court with respect to such claims, but may seek to enforce in court an arbitration award rendered pursuant to this Agreement. The parties specifically agree to waive their respective rights to a trial by jury, and further agree that no demand, request or motion will be made for trial by jury.**

[SIGNATURES TO FOLLOW ON NEXT PAGE]

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

TEMPUS LABS, INC.

By: /s/ Andy Polovin
Name: Andy Polovin
Title: General Counsel

EXECUTIVE

/s/ Ryan Fukushima
Ryan Fukushima

EXECUTIVE EMPLOYMENT AGREEMENT

This **EXECUTIVE EMPLOYMENT AGREEMENT** dated as of January 1, 2023 ("***Agreement***") is by and between **JIM ROGERS** ("***Executive***") and **TEMPUS LABS, INC.** ("***Company***").

WHEREAS, the Company desires to employ Executive as Chief Financial Officer and provide Executive with certain compensation and benefits in return for Executive's services, and Executive agrees to be employed by the Company in such capacity and to receive the compensation and benefits on the terms and conditions set forth herein; and

WHEREAS, the Company and Executive desire to enter into this Employment Agreement (the "***Agreement***") to become effective immediately, subject to Executive's signature below (the "***Effective Date***") in order to memorialize the terms and conditions of Executive's employment by the Company upon and following the Effective Date.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. Employment by the Company.

1.1 Position. Subject to the terms set forth herein, the Company agrees to employ Executive in the position of Chief Financial Officer, and Executive hereby accepts such continued employment on the terms and conditions set forth in this Agreement.

1.2 Duties. As Chief Financial Officer, Executive will report to the Chief Executive Officer (the "***CEO***"), performing such duties as are normally associated with Executive's position and such duties as are assigned to Executive from time to time, subject to the oversight and direction of the CEO. During the term of Executive's employment with the Company, Executive will work on a full-time basis for the Company and will devote Executive's best efforts and substantially all of Executive's business time and attention to the business of the Company. Executive shall perform Executive's duties under this Agreement principally out of the Company's facility in Chicago. In addition, Executive shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.3 Company Policies and Benefits. The employment relationship between the parties shall also be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Executive will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during Executive's employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

2. Compensation.

2.1 Salary. Executive shall receive for Executive's services to be rendered under this Agreement an initial base salary of **$500,000** on an annualized basis, subject to review and adjustment by the Company in its sole discretion, payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices ("***Base Salary***").

2.2 Equity Incentive Plan. During the term of Executive's employment with the Company, Executive will be eligible to participate in any then-current equity incentive plan as may be in effect from time to time and made available to similarly situated executive employees, subject to the terms of the associated plan documents and as determined by the Board of Directors of the Company (the "***Board***") in its sole discretion from time to time. The Company reserves the right to modify or terminate its incentive programs at any time in its sole discretion.

2.3 Expense Reimbursement. The Company will reimburse Executive for reasonable business expenses in accordance with the Company's standard expense reimbursement policy, as the same may be modified by the Company from time to time. The Company shall reimburse Executive for all customary and appropriate business-related expenses actually incurred and documented in accordance with Company policy, as in effect from time to time. For the avoidance of doubt, to the extent that any reimbursements payable to Executive are subject to the provisions of Section 409A of the Code: (a) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (b) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (c) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. Confidentiality, Intellectual Property, and Protective Covenants Agreement. As a condition of continued employment, Executive agreed to execute and abide by a Confidentiality, Intellectual Property, and Protective Covenants Agreement ("***Proprietary Information Agreement***"), which may be amended by the parties from time to time without regard to this Agreement. The Proprietary Information Agreement contains provisions that are intended by the parties to survive and do survive termination of this Agreement, and such terms are hereby incorporated by reference.

4. Outside Activities during Employment. Except with the prior written consent of the Board, including consent given to Executive prior to the signing of this Agreement, Executive will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Executive's responsibilities and the performance of Executive's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Executive may wish to serve, (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Executive's duties; and (iii) such other activities as may be specifically approved by the Board. This restriction shall not, however, preclude Executive (x) from owning less than one percent (1%) of the total outstanding shares of a publicly traded company, or (y) from employment or service in any capacity with Affiliates of the Company. As used in this Agreement, "***Affiliates***" means an entity under common management or control with the Company.

5. No Conflict with Existing Obligations. Executive represents that Executive's performance of all the terms of this Agreement does not and will not breach any agreement or obligation of any kind made prior to Executive's employment by the Company, including agreements or obligations Executive may have with prior employers or entities for which Executive has provided services. Executive has not entered into, and Executive agrees that Executive will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. Termination of Employment. The parties acknowledge that Executive's employment relationship with the Company is at-will, meaning either the Company or Executive may terminate Executive's employment at any time, with or without cause or advance notice. The provisions in this Section govern the amount of compensation, if any, to be provided to Executive upon termination of employment and do not alter this at-will status.

6.1 Termination without Cause or for Good Reason.

(a) The Company shall have the right to terminate Executive's employment with the Company pursuant to this **Section 6.1** at any time, in accordance with **Section 6.6**, without "Cause" (as defined in **Section 6.3(b)** below) by giving notice as described in **Section 7.1** of this Agreement. A termination pursuant to **Section 6.5** below is not a termination without "Cause" for purposes of receiving the benefits described in **Sections 6.1** or **Section 6.2**.

(b) If the Company terminates Executive's employment at any time without Cause or Executive terminates Executive's employment with the Company for Good Reason and provided that such termination constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), then Executive shall be entitled to receive the Accrued Obligations (defined below). If Executive complies with the obligations in **Section 6.1(c)** below, Executive shall also be eligible to receive the following "***Severance Benefits***":

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for twelve (12) months, less all applicable withholdings and deductions, paid in equal installments on the Company's normal payroll schedule following the termination date, with the first payment beginning on the Severance Pay Commencement Date (as defined in **Section 6.1(c)** below), and the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter; provided that on the Severance Pay Commencement Date, the Company will pay in a lump sum the aggregate amount of the cash severance payments that the Company would have paid Executive through such date had the payments commenced on the effective date of termination through the Severance Pay Commencement Date. In addition, during the six (6) month period following Executive's Separation from Service, Executive's equity will continue to satisfy any applicable time-based vesting condition, as though Executive remained employed by Company.

(c) If Executive timely elects continued coverage under COBRA for Executive and Executive's covered dependents under the Company's group health plans following such termination, then the Company shall pay the COBRA premiums necessary to continue Executive's and Executive's covered dependents' health insurance coverage in effect for Executive (and Executive's covered dependents) on the termination date until the earliest of: (i) twelve (12) months following the termination date (the "***COBRA Severance Period***"); (ii) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (iii) the date Executive ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), (the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding (such amount, the "***Special Severance Payment***"), for the remainder of the COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company. Executive will be paid all of the Accrued Obligations on the Company's first payroll date after Executive's date of termination from employment or earlier if required by law. Executive shall receive the Severance Benefits pursuant to **Section 6.1(b)** or the Change in Control Severance Benefits (defined below) pursuant to **6.2(a)** of this Agreement, as applicable, if: (i) Executive executes and does not revoke a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in a form acceptable to the Company (the "***Release***") and the Release is enforceable and effective as provided in the Release on or before the date that is the sixtieth (60th) day following the effective date of termination (such 60th day, the "***Severance Pay Commencement Date***"); (ii) if Executive holds any other positions with the Company, Executive resigns such position(s) to be effective no later than the date of Executive's termination date (or such other date as requested by the Board); (iii) Executive returns all Company property; (iv) Executive complies with Executive's post-termination obligations under this Agreement and the Proprietary Information Agreement; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in Release.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Executive's accrued but unpaid salary through the date of termination, (ii) any unreimbursed business expenses incurred by Executive payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Executive under any qualified retirement plan or health and welfare benefit plan in which Executive was a participant in accordance with applicable law and the provisions of such plan.

(e) The Severance Benefits provided to Executive pursuant to this **Section 6.1** are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy or program.

(f) Any damages caused by the termination of Executive's employment without Cause would be difficult to ascertain; therefore, the Severance Benefits for which Executive is eligible pursuant to **Section 6.1(b)** above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Executive's consent: (i) a material reduction in Executive's Base Salary of at least 25%; (ii) a material breach of this Agreement by the Company; (iii) a material reduction in the Executive's duties, authority and responsibilities relative to the Executive's duties, authority, and responsibilities in effect immediately prior to such reduction (provided that a material reduction of duties, authority and responsibilities will not be deemed to have occurred if, in connection with a Change in Control, Executive is not reporting to the individual in the same role as Executive's prior manager at the acquirer or any other top-tier holding company above the acquirer); or (iv) the relocation of Executive's principal place of employment, without Executive's consent, in a manner that lengthens Executive's one-way commute distance by fifty (50) or more miles from his then-current principal place of employment immediately prior to such relocation; *provided, however,* that, any such termination by Executive shall only be deemed for Good Reason pursuant to this definition if: (1) Executive gives the Company written notice of his intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that Executive believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); and (3) Executive voluntarily terminates Executive's employment within thirty (30) days following the end of the Cure Period.

6.2 Termination without Cause or for Good Reason Coincident with a Change in Control.

(a) If Executive's employment by the Company is terminated by the Company or any successor entity without Cause (and not due to Disability or death) or by Executive for Good Reason within two (2) months prior to or within twelve (12) months following the effective date of a "***Change in Control***" (as defined in the Company's Amended and Restated 2015 Stock Plan, as such plan may be amended from time to time (the "***2015 Plan***")), provided that such termination constitutes a Separation from Service, without regard to any alternative definition thereunder, then in addition to paying or providing Executive with the Accrued Obligations and the Severance Benefits available under **Section 6.1**, the Company will provide the following "***Change in Control Severance Benefits***":

(i) Any equity awards held by Executive that were issued pursuant to the Company's 2015 Plan or any successor plan and that remain outstanding and are unvested as of the date of such termination will immediately vest in full. For the avoidance of doubt, if such termination occurs prior to the effective date of a Change in Control, any such equity awards will remain outstanding following the date of such termination as necessary to give effect to the potential vesting acceleration set forth in this **Section 6.2(a)(iv)**, which would occur contingent upon the consummation of a Change in Control.

6.3 Termination by the Company for Cause.

(a) The Company shall have the right to terminate Executive's employment with the Company at any time, in accordance with **Section 6.6**, for Cause by giving notice as described in **Section 7.1** of this Agreement. In the event Executive's employment is terminated at any time for Cause, Executive will not receive Severance Benefits, Change in Control Severance Benefits, or any other severance compensation or benefits, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Executive the Accrued Obligations.

(b) ***"Cause"*** for termination shall mean that the Company has determined in its sole discretion that Executive has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, falsification of any documents or records, or immoral or disreputable conduct; (iii) any conduct which constitutes a felony or other criminal act involving corruption, misappropriation, or moral turpitude, or otherwise impairs your ability to perform your duties with the Company, under applicable law; (iv) material violation of any Company policy or any act of misconduct (including if Executive acts in a manner expected to have a material detrimental effect on the Company's reputation or business); (v) refusal to follow or implement a clear and reasonable directive of Company; (vi) negligence or incompetence in the performance of Executive's duties or failure to perform such duties in a manner satisfactory to the Company after the expiration of ten (10) days without cure after written notice of such failure; (vii) breach of fiduciary duty; or (viii) unauthorized use, misappropriation, destruction, or diversion of any tangible or intangible asset or corporate opportunity of the Company.

6.4 Resignation by Executive.

(a) Executive may resign from Executive's employment with the Company at any time, in accordance with **Section 6.6**, by giving notice as described in **Section 7.1**.

(b) In the event Executive resigns from Executive's employment with the Company for any reason other than Good Reason in accordance with **Sections 6.1 or 6.2**, Executive will not receive Severance Benefits, Change in Control Severance Benefits, or any other severance compensation or benefits, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Executive the Accrued Obligations.

6.5 Termination by Virtue of Death or Disability of Executive.

(a) In the event of Executive's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, in accordance with **Section 6.6**, and the Company shall, pursuant to the Company's standard payroll policies, pay to Executive's legal representatives all Accrued Obligations.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to Executive, and in accordance with **Section 6.6**, to terminate this Agreement based on Executive's Disability. Termination by the Company of Executive's employment based on "***Disability***" shall mean termination because Executive is

unable due to a physical or mental condition to perform the essential functions of his position with or without reasonable accommodation for 180 days in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Executive's employment is terminated based on Executive's Disability, Executive will not receive Severance Benefits, Change in Control Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Executive the Accrued Obligations.

6.6 Notice; Effective Date of Termination.

(a) Termination of Executive's employment pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Executive of Executive's termination, with or without Cause, unless pursuant to Section 6.3(b)(vi) in which case ten (10) days after notice if not cured or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon the Executive's death;

(iii) ten (10) days after the Company gives notice to Executive of Executive's termination on account of Executive's Disability, unless the Company specifies a later date, in which case, termination shall be effective as of such later date, *provided* that Executive has not returned to the full-time performance of Executive's duties prior to such date;

(iv) ten (10) days after the Executive gives written notice to the Company of Executive's resignation, *provided* that the Company may set a termination date at any time between the date of notice and the date of resignation, in which case the Executive's resignation shall be effective as of such other date. Executive will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Executive's full satisfaction of the requirements of **Section 6.1(g)**.

(b) In the event notice of a termination under subsections (a)(i) or (iii) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of **Section 7.1** below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation with Company after Termination of Employment. Following termination of Executive's employment for any reason, Executive agrees to cooperate fully with the Company in connection with its actual or contemplated defense, prosecution, or investigation of any claims or demands by or against third parties, or other matters arising from events, acts, or failures to act that occurred during the period of Executive's employment by the

Company. Such cooperation includes, without limitation, making Executive available to the Company upon reasonable notice, without subpoena, to provide complete, truthful and accurate information in witness interviews, depositions and trial testimony, and the failure to provide complete, truthful, and accurate information shall be a material breach of this Agreement and a basis for rescinding or forfeiting the benefits described herein. In addition, for twelve (12) months after Executive's employment with the Company ends for any reason, Executive agrees to cooperate fully with the Company in all matters relating to the transition of Executive's work and responsibilities on behalf of the Company, including, but not limited to, any present, prior or subsequent relationships and the orderly transfer of any such work and institutional knowledge to such other persons as may be designated by the Company. The Company will reimburse Executive for reasonable out-of-pocket expenses Executive incurs in connection with any such cooperation (excluding forgone wages, salary, or other compensation) and will make reasonable efforts to accommodate Executive's scheduling needs.

6.8 Application of Section 409A. It is intended that all of the severance payments payable under this Agreement satisfy, to the greatest extent possible, the exemptions from the application of Section 409A of the Code and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") provided under Treasury Regulations Sections 1.409A-1(b)(4) and 1.409A-1(b)(9), and this Agreement will be construed in a manner that complies with Section 409A. If not so exempt, this Agreement (and any definitions hereunder) will be construed in a manner that complies with Section 409A and incorporates by reference all required definitions and payment terms. No severance payments will be made under this Agreement unless Executive's termination of employment constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h)). For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulations Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement (whether severance payments or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment. If the Company determines that the severance benefits provided under this Agreement constitutes "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company, as such term is defined in Section 409A(a)(2)(B)(i) of the Code at the time of Executive's Separation from Service, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the Severance will be delayed as follows: on the earlier to occur of (a) the date that is six months and one day after Executive's Separation from Service, and (b) the date of Executive's death (such earlier date, the "***Delayed Initial Payment Date***"), the Company will (i) pay to Executive a lump sum amount equal to the sum of the severance benefits that Executive would otherwise have received through the Delayed Initial Payment Date if the commencement of the payment of the severance benefits had not been delayed pursuant to this Section 6.8 and (ii) commence paying the balance of the severance benefits in accordance with the applicable payment schedule set forth in Section 6. No interest shall be due on any amounts deferred pursuant to this Section 6.8. To the extent that any Severance Benefits are deferred compensation under Section 409A of the Code and are not otherwise exempt from the application of Section 409A, then, if the period during which Executive may consider and sign the Release spans two calendar years, the payment of any such Severance Benefit will not be made or begin until the later calendar year.

6.9 Section 280G. Notwithstanding any other provision of this Agreement to the contrary, if payments made or benefits provided pursuant to this Agreement or otherwise from the Company or any person or entity are considered "parachute payments" under Section 280G of the Code, then such parachute payments will be limited to the greatest amount that may be paid to Executive under Section 280G of the Code without causing any loss of deduction to the Company Group under such section, but only if, by reason of such reduction, the net after tax benefit to Executive will exceed the net after tax benefit if such reduction were not made. "***Net after tax benefit***" for purposes of this Agreement will mean the sum of (i) the total amounts payable to the Executive under this Agreement, plus (ii) all other payments and benefits which the Executive receives or then is entitled to receive from the Company or otherwise that would constitute a "parachute payment" within the meaning of Section 280G of the Code, less (iii) the amount of federal and state income taxes payable with respect to the foregoing calculated at the maximum marginal income tax rate for each year in which the foregoing will be paid to Executive (based upon the rate in effect for such year as set forth in the Code at the time of termination of Executive's employment), less (iv) the amount of excise taxes imposed with respect to the payments and benefits described in (i) and (ii) above by Section 4999 of the Code. The determination as to whether and to what extent payments are required to be reduced in accordance with this Section 6.9 will be made at the Company's expense by a nationally recognized certified public accounting firm as may be designated by the Company prior to a change in control (the "***Accounting Firm***"). In the event of any mistaken underpayment or overpayment under this Agreement, as determined by the Accounting Firm, the amount of such underpayment or overpayment will forthwith be paid to Executive or refunded to the Company, as the case may be, with interest at one hundred twenty (120%) of the applicable Federal rate provided for in Section 7872(f)(2) of the Code. Any reduction in payments required by this Section 6.9 will occur in the following order: (1) any cash severance, (2) any other cash amount payable to Executive, (3) any benefit valued as a "parachute payment," (4) the acceleration of vesting of any equity awards that are options, and (5) the acceleration of vesting of any other equity awards. Within any such category of payments and benefits, a reduction will occur first with respect to amounts that are not "deferred compensation" within the meaning of Section 409A and then with respect to amounts that are. In the event that acceleration of compensation from equity awards is to be reduced, such acceleration of vesting will be canceled, subject to the immediately preceding sentence, in the reverse order of the date of grant.

7. General Provisions.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Executive at either Executive's address as listed on the Company payroll, or Executive's Company-issued email address, or at such other address as the Company or Executive may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Survival. Provisions of this Agreement which by their terms must survive the termination of this Agreement in order to effectuate the intent of the parties will survive any such termination for such period as may be appropriate under the circumstances.

7.4 Waiver. If either party should waive any breach of any provisions of this Agreement, it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.5 Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the Prior Agreement. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Executive and an authorized officer of the Company. The parties have entered into a separate Proprietary Information Agreement and have or may enter into separate agreements related to equity. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of Executive's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.6 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement. The parties agree that facsimile and scanned image copies of signatures will suffice as original signatures.

7.7 Withholding Taxes. The Company will be entitled to withhold from any payment due to Executive hereunder any amounts required to be withheld by applicable tax laws or regulations.

7.8 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.9 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. Executive may not assign or transfer this Agreement or any rights or obligations hereunder, other than to his estate upon his death.

7.10 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the laws of the State of Delaware.

7.11 Dispute Resolution. The parties recognize that litigation in federal or state courts or before federal or state administrative agencies of disputes arising out of the Executive's employment with the Company or out of this Agreement, or the Executive's termination of employment or termination of this Agreement, may not be in the best interests of either the Executive or the Company, and may result in unnecessary costs, delays, complexities, and uncertainty. The parties agree that any dispute between the parties arising out of or relating to the negotiation, execution, performance or termination of this Agreement or the Executive's employment, including, but not limited to, any claim arising out of this Agreement, claims under Title VII of the Civil Rights Act of 1964, as amended, the Civil Rights Act of 1991, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, Section 1981 of the Civil Rights Act of 1966, as amended, the Family Medical Leave Act, the Executive Retirement Income Security Act, and any similar federal, state or local law, statute, regulation, or any common law doctrine, whether that dispute arises during or after employment, shall be settled by binding arbitration in accordance with the National Rules for the Resolution of Employment Disputes of the American Arbitration Association; *provided however,* that this dispute resolution provision shall not apply to any separate agreements between the parties that do not themselves specify arbitration as an exclusive remedy. The location for the arbitration shall be the Chicago, Illinois area. Any award made by such panel shall be final, binding and conclusive on the parties for all purposes, and judgment upon the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The arbitrators' fees and expenses and all administrative fees and expenses associated with the filing of the arbitration shall be borne by the Company; *provided however*, that at the Executive's option, Executive may voluntarily pay up to one-half the costs and fees. The parties acknowledge and agree that their obligations to arbitrate under this Section survive the termination of this Agreement and continue after the termination of the employment relationship between Executive and the Company. The parties each further agree that the arbitration provisions of this Agreement shall provide each party with its **exclusive remedy**, and each party expressly waives any right it might have to seek redress in any other forum, except as otherwise expressly provided in this Agreement. By electing arbitration as the means for final settlement of all claims, **the parties hereby waive their respective rights to, and agree not to, sue each other in any action in a Federal, State or local court with respect to such claims, but may seek to enforce in court an arbitration award rendered pursuant to this Agreement. The parties specifically agree to waive their respective rights to a trial by jury, and further agree that no demand, request or motion will be made for trial by jury.**

[SIGNATURES TO FOLLOW ON NEXT PAGE]

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the date first above written.

TEMPUS LABS, INC.

By: /s/ Andy Polovin
Name: Andy Polovin
Title: General Counsel

EXECUTIVE

/s/ Jim Rogers
Jim Rogers

Exhibit 10.21

SECOND AMENDMENT TO CREDIT AGREEMENT

This SECOND AMENDMENT TO CREDIT AGREEMENT, dated as of October 11, 2023 (this "Amendment"), is by and among Tempus Labs, Inc., a Delaware corporation (the "Borrower"), each other Loan Party signatory hereto, Ares Capital Corporation, as administrative agent for the Lenders party to the Credit Agreement referred to below (in such capacity, the "Administrative Agent"), and the Lenders signatory hereto, each in their individual capacity as a Lender under the Credit Agreement as in effect immediately prior to this Amendment (each, an "Existing Lender"), and in their capacity, as applicable, as a provider of the Second Amendment Effective Date Term Loan Commitments (as defined below) set forth opposite such Lender's name on Schedule I attached hereto (each, a "Second Amendment Effective Date Term Lender").

WHEREAS, reference is hereby made to the Credit Agreement, dated as of September 22, 2022 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time prior to the date hereof, the "Existing Credit Agreement" and as amended by this Amendment, the "Credit Agreement"), by and among the Borrower, the Lenders party thereto from time to time, the Administrative Agent, and Ares Capital Management LLC, as Lead Arranger and Bookrunner;

WHEREAS, the Borrower has requested that (i) the Second Amendment Effective Date Term Lenders provide additional Term Loan Commitments to fund additional Term Loans in the aggregate principal amount of $35,000,000.00 (the "Second Amendment Effective Date Term Loan Commitments"; the Term Loans provided pursuant to the Second Amendment Effective Date Term Loan Commitments, the "Second Amendment Effective Date Term Loans") in the amounts set forth on Schedule I attached hereto for working capital and general corporate purposes and (ii) make certain other amendments the Existing Credit Agreement as set forth herein; and

WHEREAS, subject to the terms and conditions set forth in this Amendment, (i) the Second Amendment Effective Date Term Lenders with a Second Amendment Effective Date Term Loan Commitment have agreed to make the Second Amendment Effective Date Term Loans and (ii) the Administrative Agent and the Lenders constituting Required Lenders signatory hereto have agreed to make such amendments to the Existing Credit Agreement as more fully set forth herein.

NOW, THEREFORE, in consideration of the premises and agreements, provisions and covenants herein contained, the parties hereto agree as follows:

Section 1. Defined Terms. Unless otherwise specifically defined herein, each capitalized term used herein has the meaning assigned to such term in the Credit Agreement.

Section 2. Amendments to Existing Credit Agreement. Subject to the satisfaction of the conditions set forth in Section 4 herein, on and as of the Second Amendment Effective Date (as defined below), and in reliance upon the representations and warranties of the Loan Parties set forth in Section 3 below, the Existing Credit Agreement is hereby amended as follows:

(a) The Existing Credit Agreement (excluding the schedules, exhibits and signature pages thereto) is hereby amended to delete the stricken text (indicated textually in the same manner as the following example: ~~stricken text~~) and to add the bold, double-underlined text (indicated textually in the same manner as the following example: **double-underlined text**) as set forth in the pages of the Credit Agreement attached hereto as Annex A.

(b) Schedule 2.01 to the Existing Credit Agreement is hereby amended by and restated in its entirety to read as Annex B attached hereto.

Section 3. Representations and Warranties. Each Loan Party hereby represents and warrants to the Administrative Agent and each Lender that on the date hereof:

(a) such Loan Party (i) is duly organized or formed, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, (ii) has the power and authority and all governmental rights, qualifications, approvals, authorizations, permits, accreditations, licenses and franchises material to the business of such Loan Party taken as a whole that are necessary to own its assets, to carry on its business as now conducted and as proposed to be conducted and to execute, deliver and perform its obligations under this Amendment and (iii) except where the failure to do so, individually or in the aggregate, is not reasonably likely to result in a Material Adverse Effect, is qualified to do business in, and is in good standing in, every jurisdiction where such qualification is required;

(b) such Loan Party is duly authorized by all necessary corporate or other action and, if required, stockholder action to enter into this Amendment;

(c) when executed and delivered by such Loan Party, this Amendment will constitute, a legal, valid and binding obligation of such Loan Party enforceable in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other laws affecting creditors' rights generally and subject to general principles of equity, regardless of whether considered in a proceeding in equity or at law;

(d) the execution, delivery and performance by such Loan Party of this Amendment and each other Loan Document to which it is a party, and the Borrowings by the Borrower under the Credit Agreement (as amended by this Amendment) (i) do not require any consent or approval of, registration or filing with, or any other action by, any Governmental Authority, except such as have been obtained or made and are in full force and effect and except those that are required or permitted to be obtained following consummation of the transactions contemplated by this Amendment, the absence of which individually or in the aggregate are not reasonably likely to result in a Material Adverse Effect and filings necessary to perfect Liens created under the Loan Documents, (ii) will not violate any Requirement of Law applicable to such Loan Party, (iii) will not violate or result in a default under any indenture or other material agreement or instrument binding upon such Loan Party or any of its assets, or give rise to a right thereunder to require any payment to be made by such Loan Party or give rise to a right of, or result in, termination, cancellation or acceleration of any material obligation thereunder, (iv) will not result in the creation or imposition of any Lien on any asset of such Loan Party, except Liens created under the Loan Documents and (v) will not violate any judgment, order, decree or injunction that is binding upon such Loan Party or any of their respective properties;

(e) as of the Second Amendment Effective Date, (a) the fair value of the assets of the Borrower, and its subsidiaries, on a consolidated basis, at fair valuation, exceeds, on a consolidated basis, their debts and liabilities, subordinated, contingent or otherwise, (b) the present fair saleable value of the property of the Borrower and its subsidiaries, on a consolidated basis, is greater than the amount that will be required to pay the probable liability, on a consolidated basis, of their debts and other liabilities, subordinated, contingent or otherwise, as such debts and other liabilities become absolute and matured, (c) the Borrower and its subsidiaries, on a consolidated basis, are able to pay their debts and liabilities, subordinated, contingent or otherwise, as such liabilities become absolute and matured and (d) the Borrower and its subsidiaries, on a consolidated basis, do not have unreasonably small capital with which to conduct the business in which they are engaged as such business is now conducted and is proposed to be conducted after the Second Amendment Effective Date;

(f) no Default or Event of Default has occurred and is continuing or would result from the funding of the Second Amendment Effective Date Term Loans and the consummation of the other transactions contemplated by this Amendment; and

(g) the representations and warranties of such Loan Party set forth in the Credit Agreement and the other Loan Documents are true and correct in all material respects (except to the extent any such representation or warranty is qualified by "materially", "Material Adverse Effect" or a similar term, in which case such representation and warranty shall be true and correct in all respects) on and as of the date of hereof, except to the extent such representations and warranties expressly relate to an earlier date (in which case such representations and warranties shall be true and correct in all material respects (except to the extent any such representation or warranty is qualified by "materially", "Material Adverse Effect" or a similar term, in which case such representation and warranty shall be true and correct in all respects) as of such earlier date).

Section 4. Conditions to Effectiveness. This Amendment and each Second Amendment Effective Date Term Lender's obligation to provide the Second Amendment Effective Date Term Loan Commitments shall become effective on the first date (the "Second Amendment Effective Date") when, and only when, each of the applicable conditions set forth below have been satisfied (or waived) in accordance with the terms herein:

(a) the Administrative Agent shall have received from the Borrower, each other Loan Party, the Existing Lenders constituting Required Lenders and each Second Amendment Effective Date Term Lender a counterpart to this Amendment, duly executed and delivered on behalf of such party;

(b) the Administrative Agent shall have received each of the items set forth on Annex C attached hereto, in each case, in form and substance reasonably acceptable to the Administrative Agent;

(c) receipt by the Administrative Agent in dollars and in immediately available funds, for the benefit of each Second Amendment Effective Date Term Lender, based on its pro rata share of the aggregate amount of the Second Amendment Effective Date Term Loan on the Second Amendment Effective Date, a non-refundable closing fee in an aggregate amount equal to 2.50% ($875,000.00) of the aggregate principal amount of the Second Amendment Effective Date Term Loan, which such fee shall be fully earned, due and payable on the date hereof and paid from the proceeds of the Second Amendment Effective Date Term Loans;

(d) all fees and expenses required to be paid on the Second Amendment Effective Date pursuant to the Loan Documents (in the case of expenses, to the extent invoiced at least one (1) Business Day prior to the Second Amendment Effective Date) shall have been paid from the proceeds of the Second Amendment Effective Date Term Loans;

(e) the truth and accuracy of the representations and warranties in Section 3 hereof; and

(f) both immediately before and after giving effect to this Amendment, the funding of the Second Amendment Effective Date Term Loans and the consummation of the other transactions contemplated by this Amendment, no Default or Event of Default shall have occurred and be continuing.

Section 5. Effect of Amendment; Reaffirmation and Ratification of Obligations; Etc. Except as expressly set forth herein or in the Credit Agreement, this Amendment shall not by implication or otherwise limit, impair, constitute a waiver of or otherwise affect the rights and remedies of the Lenders or the Administrative Agent under the Credit Agreement or under any other Loan Document or constitute a course of conduct or dealing among the parties, and shall not alter, modify, amend or in any way affect any of the terms, conditions, obligations, covenants or agreements contained in the Credit Agreement or any other provision of the Credit Agreement or of any Loan Document, all of which are ratified and affirmed in all respects and shall continue in full force and effect. Each Loan Party hereby acknowledges and agrees that the Credit Agreement and each other Loan Document to which it is a party is hereby confirmed and ratified and shall remain in full force and effect according to its respective terms. On and as of the Second Amendment Effective Date, each reference in the Credit Agreement to "this Agreement", "hereof", "hereunder", "herein" and "hereby" and each other similar reference, and each reference in any Loan Document to "the Credit Agreement", "thereof", "thereunder", "therein" or "thereby" or any other similar reference to the Credit Agreement shall refer to the Credit Agreement as amended by this Amendment. This Amendment constitutes a Loan Document.

Section 6. Release of Claims. In consideration of the agreements of the Administrative Agent and the Lenders contained in this Amendment, each Loan Party hereby irrevocably releases and forever discharges the Administrative Agent and the Lenders and their respective affiliates, subsidiaries, successors, assigns, directors, officers, employees, agents, consultants and attorneys (each, a "Released Person") of and from any and all claims, suits, actions, investigations, proceedings or demands, whether based in contract, tort, implied or express warranty, strict liability, criminal or civil statute or common law of any kind or character, known or unknown, which such Loan Party ever had or now has against the Administrative Agent, any Lender or any other Released Person which relates, directly or indirectly, to any acts or omissions of the Administrative Agent, any Lender or any other Released Person relating to the Credit Agreement or any other Loan Document on or prior to the date hereof.

Section 7. Severability. Any provision of this Amendment held to be invalid, illegal or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability without affecting the validity, legality and enforceability of the remaining provisions hereof; and the invalidity of a particular provision in a particular jurisdiction shall not invalidate such provision in any other jurisdiction.

Section 8. Captions. Captions used in this Amendment are for convenience only and shall not affect the construction of this Amendment.

Section 9. Governing Law; Jurisdiction; Consent to Service of Process. This Amendment shall be construed in accordance with and governed by the laws of the State of New York. The provisions of Section 9.09(b), (c) and (d) and Section 9.10 are incorporated herein by reference, *mutatis mutandis*, and the parties hereto agree to such terms.

Section 10. Counterparts. This Amendment may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Amendment constitutes the entire contract among the parties relating to the subject matter hereof and supersede any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. Delivery of an executed counterpart of a signature page of this Amendment by facsimile or electronic transmission shall be effective as delivery of a manually executed counterpart of this Amendment.

Section 11. Covenants of New Lenders. Each Second Amendment Effective Date Term Lender that was not a Lender of record immediately prior to the Second Amendment Effective Date (a) represents

and warrants that (i) from and after the Second Amendment Effective Date, it shall be bound by the provisions of the Credit Agreement, as amended by this Amendment, as a Lender thereunder and, to the extent of its respective Second Amendment Effective Date Term Loan Commitments and Second Amendment Effective Date Term Loans, shall have the obligations and rights of a Lender thereunder and (ii) it has independently and without reliance upon the Administrative Agent or any other Lender and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Amendment and to make its respective Second Amendment Effective Date Term Loans and (b) agrees that (i) it will, independently and without reliance on the Agent or any Lender, and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under the Loan Documents, and (ii) it will perform in accordance with their terms all of the obligations which by the terms of the Loan Documents are required to be performed by it as a Lender.

—Remainder of Page Intentionally Left Blank; Signature Pages Follow—

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective authorized officers as of the day and year first above written.

TEMPUS LABS, INC., a Delaware corporation

By: /s/ James Rogers
Name: James Rogers
Title: Chief Financial Officer

AKESOGEN INC., a Delaware corporation

By: /s/ James Rogers
Name: James Rogers
Title: Chief Financial Officer

TEMPUS COMPASS, LLC, a California limited liability company (f/k/a HIGHLINE CONSULTING LLC)

By: Tempus Labs, Inc., its Sole Member

By: /s/ James Rogers
Name: James Rogers
Title: Chief Financial Officer

ARTERYS INC., a Delaware corporation

By: /s/ James Rogers
Name: James Rogers
Title: Chief Financial Officer

MPIRIK, INC., a Delaware corporation

By: /s/ James Rogers
Name: James Rogers
Title: Chief Financial Officer

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective authorized officers as of the day and year first above written.

ARES CAPITAL CORPORATION,
as Administrative Agent, an Existing Lender and Second Amendment Effective Date Term Lender

By: /s/ Kort Schnabel
Name: Kort Schnabel
Title: Authorized Signatory

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective authorized officers as of the day and year first above written.

LENDERS:

ARES SFERS CREDIT STRATEGIES FUND LLC, as an Existing Lender and Second Amendment Effective Date Term Lender

By: Ares Capital Management LLC, its investment manager

By: /s/ Kort Schnabel
Name: Kort Schnabel
Title: Authorized Signatory

AO MIDDLE MARKET CREDIT L.P., as an Existing Lender and Second Amendment Effective Date Term Lender

By: OCM Middle Market Credit G.P. Inc., its general partner

By: /s/ K. Patel
Name: K. Patel
Title: Director

By: /s/ Jeremy Ehrlich
Name: Jeremy Ehrlich
Title: Director

ASH HOLDINGS II (U), L.P., as a Second Amendment Effective Date Term Lender

By: Ares Capital Management LLC, its Manager

By: /s/ Kort Schnabel
Name: Kort Schnabel
Title: Authorized Signatory

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective authorized officers as of the day and year first above written.

LENDERS (continued):

ARES CREDIT STRATEGIES INSURANCE DEDICATED FUND SERIES INTERESTS OF THE SALI MULTI-SERIES FUND, L.P., as an Existing Lender

By: Ares Management LLC, its investment subadvisor
By: Ares Capital Management LLC, as subadvisor

By: /s/ Kort Schnabel
Name: Kort Schnabel
Title: Authorized Signatory

ARES DIRECT FINANCE I LP, as an Existing Lender

By: Ares Capital Management LLC, its investment manager

By: /s/ Kort Schnabel
Name: Kort Schnabel
Title: Authorized Signatory

AO MIDDLE MARKET CREDIT FINANCING L.P., as an Existing Lender

By: AO Middle Market Credit Financing GP Ltd., its general partner

By: /s/ K. Patel
Name: K. Patel
Title: Director

By: /s/ Jeremy Ehrlich
Name: Jeremy Ehrlich
Title: Director

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective authorized officers as of the day and year first above written.

ARES DIVERSIFIED CREDIT STRATEGIES FUND (S), L.P., as an Existing Lender

By: Ares Management LLC, its investment manager
By: Ares Management LLC, its sub-advisor

By: /s/ Kort Schnabel
Name: Kort Schnabel
Title: Authorized Signatory

SCHEDULE I

Second Amendment Effective Date Term Loan Commitments

ANNEX A

Credit Agreement

See attached.

CREDIT AGREEMENT[1]

dated as of

September 22, 2022

by and among

TEMPUS LABS, INC.,
as the Borrower,

the Lenders party hereto from time to time,

and

ARES CAPITAL CORPORATION,
as Administrative Agent and Collateral Agent

ARES CAPITAL MANAGEMENT LLC,
as Lead Arranger and Bookrunner

1 Amended to reflect changes through the (i) Limited Waiver and First Amendment to Credit Agreement, dated as of April ~~[●]~~25, 2023, and (ii) Second Amendment to Credit Agreement, dated as of October 11, 2023.

TABLE OF CONTENTS

	Page
ARTICLE I Definitions	1
SECTION 1.01. Defined Terms	1
SECTION 1.02. Classification of Loans and Borrowings	~~32~~28
SECTION 1.03. Terms Generally	~~32~~28
SECTION 1.04. Accounting Terms; GAAP	~~32~~29
SECTION 1.05. Rates	29
SECTION 1.06. Divisions	~~33~~29
ARTICLE II The Credits	~~33~~30
SECTION 2.01. Commitments	~~33~~30
SECTION 2.02. Loans and Borrowings	~~34~~30
SECTION 2.03. Requests for Borrowings	~~34~~31
SECTION 2.04. [Reserved]	~~35~~31
SECTION 2.05. [Reserved]	~~35~~31
SECTION 2.06. Funding of Borrowings	~~35~~31
SECTION 2.07. Interest Elections	~~35~~32
SECTION 2.08. Termination of Commitments	~~36~~33
SECTION 2.09. Evidence of Debt	~~36~~33
SECTION 2.10. Repayment of Loans; Amortization of Term Loans	~~37~~34
SECTION 2.11. Prepayment of Loans	~~37~~34
SECTION 2.12. Fees	~~39~~36
SECTION 2.13. Interest	~~40~~38
SECTION 2.14. Benchmark Replacement Setting	~~42~~40
SECTION 2.15. Increased Costs	~~43~~41
SECTION 2.16. Break Funding Payments	~~44~~42
SECTION 2.17. Taxes	~~45~~42
SECTION 2.18. Payments Generally; Pro Rata Treatment; Sharing of Setoffs	~~49~~46
SECTION 2.19. Mitigation Obligations; Replacement of Lenders	~~50~~48
ARTICLE III Representations and Warranties	~~51~~49
SECTION 3.01. Organization; Power	~~51~~49
SECTION 3.02. Authorization; Enforceability	~~51~~49
SECTION 3.03. Governmental Approvals; No Conflicts	~~52~~49
SECTION 3.04. Financial Condition; No Material Adverse Change; Projections; No Default	~~52~~49
SECTION 3.05. Properties	~~53~~50
SECTION 3.06. Litigation	~~53~~51
SECTION 3.07. Compliance with Laws and Agreements	~~54~~51
SECTION 3.08. Investment Company Status	~~54~~51
SECTION 3.09. Taxes	~~54~~51
SECTION 3.10. ERISA	~~54~~51
SECTION 3.11. Reports	~~54~~51
SECTION 3.12. Subsidiaries	~~54~~52

Page
SECTION 3.13. Insurance 5452
SECTION 3.14. Labor Matters 5452
SECTION 3.15. Solvency 5552
SECTION 3.16. Margin Regulations 5552
SECTION 3.17. Patriot Act 5552
SECTION 3.18. Anti-Corruption Laws 5653
SECTION 3.19. Intellectual Property; Licenses, Etc. 5653
SECTION 3.20. [Reserved] 5754
SECTION 3.21. Environmental Compliance 5754
SECTION 3.22. Health Care Regulatory Matters 5855
SECTION 3.23. Deposit Accounts and Securities Accounts. Schedule 3.23 56
SECTION 3.24. Use of Proceeds 5956
SECTION 3.25. Absence of Undisclosed Liabilities 5956

ARTICLE IV Conditions 5957

SECTION 4.01. Effective Date 5957

ARTICLE V Affirmative Covenants 6259

SECTION 5.01. Financial Statements and Other Information 6259
SECTION 5.02. Notices of Material Events 6360
SECTION 5.03. Information Regarding Collateral 6562
SECTION 5.04. Existence; Conduct of Business; Public Health Laws 6662
SECTION 5.05. Payment of Taxes 6663
SECTION 5.06. Maintenance of Properties 6663
SECTION 5.07. Insurance 6663
SECTION 5.08. Casualty and Condemnation 6763
SECTION 5.09. Books and Records; Inspection and Audit Rights 6764
SECTION 5.10. Compliance with Laws 6764
SECTION 5.11. Use of Proceeds 6764
SECTION 5.12. Additional Subsidiaries 6864
SECTION 5.13. Further Assurances 6865
SECTION 5.14. Environmental Matters 6865
SECTION 5.15. Annual Lender Meeting 6865
SECTION 5.16. Post-Closing Covenants 6965

ARTICLE VI Negative Covenants 6966

SECTION 6.01. Indebtedness 6966
SECTION 6.02. Liens 7168
SECTION 6.03. Fundamental Changes; Line of Business 7369
SECTION 6.04. Investments, Loans, Advances, Guarantees and Acquisitions 7370
SECTION 6.05. Asset Sales 7572
SECTION 6.06. Sale and Leaseback Transactions 7773
SECTION 6.07. [Reserved] 7774
SECTION 6.08. Restricted Payments; Certain Payments of Indebtedness 7774
SECTION 6.09. Transactions with Affiliates 7975
SECTION 6.10. Restrictive Agreements 8076
SECTION 6.11. Amendment of Material Documents 8177

	Page
SECTION 6.12. Financial Performance Covenants	~~81~~77
SECTION 6.13. Accounting; Fiscal Year	78
SECTION 6.14. Swap Agreements	~~81~~78
SECTION 6.15. Changes in Name	~~82~~78
SECTION 6.16. OFAC; Patriot Act	~~82~~78
SECTION 6.17. Issuance or Repurchase of Equity Interests	~~82~~78
SECTION 6.18. Capital Expenditures	~~82~~78
ARTICLE VII Events of Default	~~82~~79
SECTION 7.01. Events of Default	~~82~~79
SECTION 7.02. Right to Cure	82
ARTICLE VIII The Agents	~~86~~82
SECTION 8.01. Appointment	~~86~~82
SECTION 8.02. The Administrative Agent	~~86~~83
SECTION 8.03. Exculpatory Provisions	~~87~~83
SECTION 8.04. Reliance by Administrative Agent	~~87~~83
SECTION 8.05. Notice of Default	~~87~~84
SECTION 8.06. Non-Reliance on Agents and Other Lenders	~~88~~84
SECTION 8.07. Indemnification	~~88~~84
SECTION 8.08. Agent in Its Individual Capacity	~~88~~85
SECTION 8.09. Successor Administrative Agent	~~89~~85
SECTION 8.10. Erroneous Payments	~~89~~85
ARTICLE IX Miscellaneous	~~91~~87
SECTION 9.01. Notices	~~91~~87
SECTION 9.02. Waivers; Amendments	~~92~~88
SECTION 9.03. Expenses; Indemnity; Damage Waiver	~~95~~91
SECTION 9.04. Successors and Assigns	~~96~~92
SECTION 9.05. Survival	~~100~~96
SECTION 9.06. Counterparts; Integration; Effectiveness	~~100~~96
SECTION 9.07. Severability	~~100~~96
SECTION 9.08. Right of Setoff	~~101~~96
SECTION 9.09. Governing Law; Jurisdiction; Consent to Service of Process	~~101~~97
SECTION 9.10. WAIVER OF JURY TRIAL	~~102~~97
SECTION 9.11. Headings	~~102~~98
SECTION 9.12. Confidentiality	~~102~~98
SECTION 9.13. Interest Rate Limitation	~~103~~98
SECTION 9.14. USA Patriot Act	~~103~~98
SECTION 9.15. Release of Collateral	~~103~~99
SECTION 9.16. Acknowledgement and Consent to Bail-In of Affected Financial Institutions	~~103~~99

SCHEDULES TO DISCLOSURE LETTER:

Schedule 2.01	—	Term Loan Commitments
Schedule 3.03	—	No Conflicts
Schedule 3.05	—	Real Property
Schedule 3.06	—	Litigation
Schedule 3.07	—	Compliance with Laws
Schedule 3.12	—	Subsidiaries
Schedule 3.13	—	Insurance
Schedule 3.14	—	Collective Bargaining Agreements
Schedule 3.23	—	Deposit Accounts and Securities Account
Schedule 5.16	—	Post-Closing Covenants
Schedule 6.01(iii)	—	Effective Date Indebtedness
Schedule 6.01(xiii)	—	Effective Date Non-Loan Party Subsidiary Indebtedness
Schedule 6.02	—	Liens
Schedule 6.04(iii)	—	Effective Date Investments
Schedule 6.04(xvii)	—	Effective Date Non-Loan Party Subsidiary Investments
Schedule 6.09	—	Transactions with Affiliates
Schedule 6.10	—	Restrictions

EXHIBITS:

Exhibit A	—	Form of Assignment and Assumption
Exhibit B	—	[Reserved]
Exhibit C	—	[Reserved]
Exhibit D	—	Form of Perfection Certificate
Exhibit E	—	Form of Borrowing Request
Exhibit F	—	Form of Interest Election Request
Exhibit G	—	Form of Term Loan Note
Exhibit H	—	[Reserved]
Exhibit I-1-4	—	U.S. Tax Compliance Certificates
Exhibit J	—	Form of Solvency Certificate

CREDIT AGREEMENT

This CREDIT AGREEMENT is entered into as of September 22, 2022, by and among TEMPUS LABS, INC., a Delaware corporation (the "Borrower"), the Lenders party hereto from time to time, ARES CAPITAL CORPORATION, as Administrative Agent, and ARES CAPITAL MANAGEMENT LLC, as Lead Arranger and Bookrunner.

The Borrower has requested that the Lenders extend credit to the Borrower in the form of (i) Effective Date Term Loans in an aggregate principal amount not to exceed $175,000,000, upon and subject to the terms and conditions set forth in this Agreement ~~and~~, (ii) First Amendment Effective Date Term Loans in an aggregate principal amount not to exceed $50,000,000, upon and subject to the terms and conditions set forth in the First Amendment, and (iii) Second Amendment Effective Date Term Loans in an aggregate principal amount not to exceed $35,000,000, upon and subject to the terms and conditions set forth in the Second Amendment.

The proceeds of the Term Loans will be used by the Borrower (i) for working capital and general corporate purposes, (ii) to finance growth initiatives, (iii) to pay for operating expenses and (iv) to pay the Transaction Costs.

The Lenders are willing to extend such credit to the Borrower, on the terms and subject to the conditions set forth herein. Accordingly, the parties hereto agree as follows:

ARTICLE I

Definitions

SECTION 1.01. Defined Terms. As used in this Agreement, the following terms have the meanings specified below:

"Administrative Agent" means Ares Capital Corporation, in its capacity as administrative agent for the Lenders under the Loan Documents, and any successor administrative agent.

"Administrative Questionnaire" means an administrative questionnaire in a form supplied by the Administrative Agent.

"Affected Financial Institution" means (a) any EEA Financial Institution or (b) any UK Financial Institution.

"Affiliate" means, with respect to a specified Person, any other Person that directly, or indirectly through one or more intermediaries, Controls, is Controlled by or is under common Control with the Person specified.

"Agent Indemnitee" has the meaning set forth in Section 8.07.

"Agents" means, as applicable, the Administrative Agent and the Collateral Agent.

"Aggregate Exposure" means with respect to any Lender at any time, an amount equal to (a) until the Effective Date, the aggregate amount of such Lender's Commitments at such time and (b) thereafter, the aggregate then unpaid principal amount of such Lender's Term Loans.

"Aggregate Exposure Percentage" means with respect to any Lender at any time, the ratio (expressed as a percentage) of such Lender's Aggregate Exposure at such time to the Aggregate Exposure of all Lenders at such time.

"Agreement" means this Credit Agreement, as the same may be renewed, extended, modified, supplemented or amended from time to time.

"Annual Financial Statements" means the audited consolidated financial statements of the Borrower for the fiscal years ended December 31, 2019, December 31, 2020 and December 31, 2021.

"Anti-Corruption Laws" all laws, rules, and regulations of any jurisdiction applicable to the Borrower or any Subsidiary from time to time concerning or relating to bribery or corruption.

"Anti-Terrorism Laws" has the meaning set forth in Section 3.17.

"Applicable Rate" means; (x) prior to the First Amendment Effective Date, the "Applicable Rate" as defined in this Agreement immediately prior to giving effect to the First Amendment and (y) from and after the First Amendment Effective Date immediately after giving effect to the First Amendment, for any day with respect to any Term Loans, (a) for any Interest Period for which the Borrower exercises the PIK Election, (i) 4.00% per annum in the case of a Base Rate Loan or (ii) 5.00% per annum in the case of a SOFR Loan or (b) for any Interest Period for which the Borrower exercises the Cash Election, (i) 6.25% per annum in the case of a Base Rate Loan or (ii) 7.25% per annum in the case of a SOFR Loan.

"Approved Fund" has the meaning set forth in Section 9.04(b).

"Assignees" has the meaning set forth in Section 9.04(b).

"Assignment and Assumption" means an assignment and assumption entered into by a Lender and an Eligible Assignee (with the consent of any party whose consent is required by Section 9.04) and accepted by the Administrative Agent, in the form of Exhibit A or any other form approved by the Administrative Agent.

"Available Basket Amount" means, as of any date of determination, (a) without duplication, the net cash proceeds of any issuance of Equity Interests of the Borrower (other than Disqualified Equity Interests) and 100% of the aggregate amount of cash contributions to the common capital of the Borrower, in each case after the Effective Date (in each case, to the extent not earmarked or for any other purposes under this Agreement or the other Loan Documents or Not Otherwise Applied), minus (b) the aggregate amount of Investments (including Permitted Acquisitions and payments in respect of earnouts, milestone and other similar deferred purchase price obligations) and other payments made in respect of the Google Note, in each case, made using the Available Basket Amount on or prior to such date.

"Available Tenor" means, as of any date of determination and with respect to the then-current Benchmark, as applicable, (x) if such Benchmark is a term rate, any tenor for such Benchmark (or component thereof) that is or may be used for determining the length of an interest period pursuant to this Agreement or (y) otherwise, any payment period for interest calculated with reference to such Benchmark (or component thereof) that is or may be used for determining any frequency of making payments of interest calculated with reference to such Benchmark, pursuant to this Agreement, in each case, as of such date and not including, for the avoidance of doubt, any tenor for such Benchmark that is then-removed from the definition of "Interest Period" pursuant to clause (d) of Section 2.14.

"Bail-In Action" means the exercise of any Write-Down and Conversion Powers by the applicable EEA Resolution Authority in respect of any liability of an EEA Financial Institution.

"Bail-In Legislation" means (a) with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law, regulation rule or requirement for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule and (b) with respect to the United Kingdom, Part I of the United Kingdom Banking Act 2009 (as amended from time to time) and any other law, regulation or rule applicable in the United Kingdom relating to the resolution of unsound or failing banks, investment firms or other financial institutions or their affiliates (other than through liquidation, administration or other insolvency proceedings).

"Bankruptcy Code" means Title 11 of the United States Code entitled "Bankruptcy," as now and hereafter in effect, or any successor statute.

"Bankruptcy Event" means, with respect to any Person, such Person becomes the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee, administrator, custodian, assignee for the benefit of creditors or similar Person charged with the reorganization or liquidation of its business appointed for it, or, in the good faith determination of the Administrative Agent, has taken any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any such proceeding or appointment; provided that a Bankruptcy Event shall not result solely by virtue of any ownership interest, or the acquisition of any ownership interest, in such Person by a Governmental Authority or instrumentality thereof; provided, further, that such ownership interest does not result in or provide such Person with immunity from the jurisdiction of courts within the United States or from the enforcement of judgments or writs of attachment on its assets or permit such Person (or such Governmental Authority or instrumentality) to reject, repudiate, disavow or disaffirm any contracts or agreements made by such Person.

"Base Rate" means the greatest of (a) the "Prime Rate" appearing in the "Money Rates" section of The Wall Street Journal or another national publication selected by Agent, (b) the Federal Funds Rate plus 0.50%, (c) Term SOFR for a one-month tenor in effect on such day plus 1.00%, in each instance as of such day and (d) 2.00%. Any change in the Base Rate due to a change in any of the foregoing shall be effective on the effective date of such change in the Prime Rate, the Federal Funds Rate or Term SOFR for an Interest Period of one month.

"Base Rate Borrowing", when used in reference to any Borrowing, refers to whether the Loans comprising such Borrowing are bearing interest at a rate determined by reference to the Base Rate.

"Base Rate Loan", when used in reference to any Loan, refers to whether such Loan is bearing interest at a rate determined by reference to the Base Rate.

"Base Rate Term SOFR Determination Day" has the meaning set forth in the definition of "Term SOFR".

"Benchmark" means, initially, the Term SOFR Reference Rate; provided that if a Benchmark Transition Event has occurred with respect to the Term SOFR Reference Rate or the then-current Benchmark, then "Benchmark" means the applicable Benchmark Replacement to the extent that such Benchmark Replacement has replaced such prior benchmark rate pursuant to clause (a) of Section 2.14.

"Benchmark Replacement" means, with respect to any Benchmark Transition Event, the sum of: (a) the alternate benchmark rate that has been selected by the Administrative Agent and the Borrower giving due consideration to (i) any selection or recommendation of a replacement benchmark rate or the mechanism for determining such a rate by the Relevant Governmental Body or (ii) any evolving or then-prevailing market convention for determining a benchmark rate as a replacement to the then-current Benchmark for Dollar-denominated syndicated credit facilities at such time and (b) the related Benchmark Replacement Adjustment; provided that, if such Benchmark Replacement as so determined would be less than the Floor, such Benchmark Replacement will be deemed to be the Floor for the purposes of this Agreement and the other Loan Documents.

"Benchmark Replacement Adjustment" means, with respect to any replacement of the then-current Benchmark with an Unadjusted Benchmark Replacement, the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected by the Administrative Agent and the Borrower giving due consideration to (a) any selection or recommendation of a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement by the Relevant Governmental Body or (b) any evolving or then-prevailing market convention for determining a spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of such Benchmark with the applicable Unadjusted Benchmark Replacement for Dollar-denominated syndicated credit facilities.

"Benchmark Replacement Date" means the earlier to occur of the following events with respect to the then-current Benchmark:

(1) in the case of clause (a) or (b) of the definition of "Benchmark Transition Event", the later of (i) the date of the public statement or publication of information referenced therein and (ii) the date on which the administrator of such Benchmark (or the published component used in the calculation thereof) permanently or indefinitely ceases to provide all Available Tenors of such Benchmark (or such component thereof); or

(2) in the case of clause (c) of the definition of "Benchmark Transition Event", the first date on which such Benchmark (or the published component used in the calculation thereof) has been determined and announced by the regulatory supervisor for the administrator of such Benchmark (or such component thereof) to be non-representative; provided that such non-representativeness, non-compliance or non-alignment will be determined by reference to the most recent statement or publication referenced in such clause (c) and even if any Available Tenor of such Benchmark (or such component thereof) continues to be provided on such date.

For the avoidance of doubt, the "Benchmark Replacement Date" will be deemed to have occurred in the case of clause (1) or (2) with respect to any Benchmark upon the occurrence of the applicable event or events set forth therein with respect to all then-current Available Tenors of such Benchmark (or the published component used in the calculation thereof).

"Benchmark Transition Event" means the occurrence of one or more of the following events with respect to the then-current Benchmark:

(a) a public statement or publication of information by or on behalf of the administrator of such Benchmark (or the published component used in the calculation thereof) announcing that such administrator has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof), permanently or indefinitely; provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof);

(b) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof), the Federal Reserve Board, the NYFRB, an insolvency official with jurisdiction over the administrator for such Benchmark (or such component), a resolution authority with jurisdiction over the administrator for such Benchmark (or such component) or a court or an entity with similar insolvency or resolution authority over the administrator for such Benchmark (or such component), which states that the administrator of such Benchmark (or such component) has ceased or will cease to provide all Available Tenors of such Benchmark (or such component thereof) permanently or indefinitely; provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide any Available Tenor of such Benchmark (or such component thereof); or

(c) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark (or the published component used in the calculation thereof) announcing that all Available Tenors of such Benchmark (or such component thereof) are not, or as of a specified future date will not be, representative.

For the avoidance of doubt, a "Benchmark Transition Event" will be deemed to have occurred with respect to any Benchmark if a public statement or publication of information set forth above has occurred with respect to each then-current Available Tenor of such Benchmark (or the published component used in the calculation thereof).

"Benchmark Transition Start Date" means, in the case of a Benchmark Transition Event, the earlier of (a) the applicable Benchmark Replacement Date and (b) if such Benchmark Transition Event is a public

statement or publication of information of a prospective event, the 90th day prior to the expected date of such event as of such public statement or publication of information (or if the expected date of such prospective event is fewer than 90 days after such statement or publication, the date of such statement or publication).

"Benchmark Unavailability Period" means, the period (if any) (a) beginning at the time that a Benchmark Replacement Date has occurred if, at such time, no Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with Section 2.14 and (b) ending at the time that a Benchmark Replacement has replaced the then-current Benchmark for all purposes hereunder and under any Loan Document in accordance with Section 2.14.

"Board" means the Board of Governors of the Federal Reserve System of the United States of America.

"Board of Directors" shall mean, with respect to any Person, (i) in the case of any corporation, the board of directors of such Person or any committee thereof duly authorized to act on behalf of such board, (ii) in the case of any limited liability company, the board of managers, board of directors, manager or managing member of such Person, (iii) in the case of any partnership, the board of directors or board of managers of the general partner of such Person and (iv) in any other case, the functional equivalent of the foregoing.

"Borrower" has the meaning set forth in the preamble to this Agreement.

"Borrowing" means Loans of the same Type made, converted or continued on the same date and, in the case of SOFR Loans, as to which a single Interest Period is in effect.

"Borrowing Request" means a written request by the Borrower for a Borrowing in accordance with Section 2.03; provided that a written Borrowing Request shall be substantially in the form of Exhibit E, or such other form as shall be approved by the Administrative Agent.

"Business Day" means any day on which commercial banks are open for commercial banking business in Chicago, Illinois and New York, New York; provided, that for purposes of determining the rate of interest applicable to any Loan the reference rate for which utilizes Term SOFR and for any notice periods related to the borrowing or continuation of, or the conversion into, a SOFR Loan, "Business Day" shall exclude any day on which the Securities Industry and Financial Markets Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in United States government securities.

"Capital Expenditure Carryover Amount" has the meaning specified in Section 6.18.

"Capital Expenditures" means, with respect to any Person for any period, the aggregate amount of all expenditures (whether paid in cash or accrued as a liability) by such Person during that period for the acquisition or leasing (pursuant to a Capital Lease) of fixed or capital assets or additions to property, plant, or equipment (including replacements, capitalized repairs, and improvements) which should be capitalized on the balance sheet of such Person in accordance with GAAP.

"Capital Lease" means any lease of property which in accordance with GAAP is required to be capitalized on the balance sheet of the lessee.

"Capital Lease Obligations" of any Person means the obligations of such Person to pay rent or other amounts under any lease of (or other arrangement conveying the right to use) real or tangible personal property, or a combination thereof, which obligations are, or are required to be, classified and accounted for as capital leases on the balance sheet of such Person under GAAP; provided, that for all purposes hereunder, any obligations of such Person that would have been treated as operating leases in accordance with Accounting Standards Codification 840 (regardless of whether or not then in effect) shall be treated as operating leases for purposes of all financial definitions, calculations and covenants, without giving effect to Accounting Standards Codification 842 requiring operating leases to be recharacterized or treated as capital leases.

"Cash Election" has the meaning specified in Section 2.13(f).

"CERCLA" means the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as subsequently amended.

"CERCLIS" means the Comprehensive Environmental Response, Compensation and Liability Information System maintained by the U.S. Environmental Protection Agency.

"Change in Law" means (a) the adoption of any law, rule or regulation after the date of this Agreement, (b) any change in any law, rule or regulation or in the interpretation or application thereof by any Governmental Authority after the date of this Agreement or (c) compliance by any Lender (or, for purposes of Section 2.15(b), by any lending office of such Lender or by such Lender's holding company, if any) with any request, guideline or directive (whether or not having the force of law) of any Governmental Authority made or issued after the date of this Agreement.

"Change of Control" means:

(a) at any time prior to an IPO, the Permitted Holders, directly or indirectly, shall cease to beneficially own (within the meaning of Rule 13d-3 and Rule 13d-5 under the Exchange Act) Equity Interests representing more than 50.1% of the total voting power of all of the outstanding voting stock of the Borrower;

(b) at any time on or after an IPO, the acquisition by any Person or group (within the meaning of Section 13(d)(3) or Section 14(d)(2) of the Exchange Act), but excluding any employee benefit plan and/or Person acting as the trustee, agent or other fiduciary or administrator therefor, other than one or more Permitted Holders, in a single transaction or in a related series of transactions, by way of merger, amalgamation, consolidation or other business combination or purchase of beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of Equity Interests representing more than 35.0% of the total voting power of all of the outstanding voting stock of the Borrower;

(c) Eric Lefkofsky shall cease to have the right or ability by voting power, contract or otherwise to elect or designate for election at least a majority of the Board of Directors of the Borrower;

(d) Eric Lefkofsky shall (i) cease to be the Chief Executive Officer of the Borrower and (ii) cease to be a member of the Board of Directors of the Borrower, in each case within three (3) years of the Effective Date and, in each case, except as a result of his death, disability or incapacitation; or

(e) the occurrence of a "Change of Control", as defined in any Material Indebtedness.

"Charges" has the meaning set forth in Section 9.13.

"Code" means the Internal Revenue Code of 1986 and the rules and regulations promulgated thereunder, as amended from time to time.

"Collateral" means any and all "Collateral", as defined in any applicable Security Document (which shall include the Mortgaged Properties) and all other property of whatever kind subject or purported to be subject from time to time to a Lien under any Security Document.

"Collateral Agent" means Ares Capital Corporation, in its capacity as collateral agent for the Lenders under this Agreement and any Security Document.

"Collateral Agreement" means the Guarantee and Collateral Agreement among the Loan Parties and the Collateral Agent, dated as of the Effective Date (as amended or supplemented from time to time).

"Collateral and Guarantee Requirement" means the requirement that:

(a) the Collateral Agent shall have received from each Loan Party either (i) a counterpart of the Collateral Agreement duly executed and delivered on behalf of such Loan Party or (ii) in the case of any Person that becomes a Loan Party after the Effective Date, a supplement to the Collateral Agreement, in the form specified therein, duly executed and delivered on behalf of such Loan Party;

(b) all outstanding Equity Interests of each wholly owned Subsidiary owned directly by any Loan Party shall have been pledged pursuant to the Collateral Agreement (except that the Loan Parties (i) shall not be required to pledge or otherwise grant security interests in (A) any assets of a direct or indirect Foreign Subsidiary or (B) any assets of any Domestic Subsidiary if substantially all of its assets consist of the Equity Interests or Equity Interests and Indebtedness of (x) one or more direct or indirect Foreign Subsidiaries that are "controlled foreign corporations" under Section 957 of the Code if any of the dividends of such controlled foreign corporation are not entitled to the dividends received deduction under Section 245A of the Code (as reasonably determined by the Borrower in good faith) or (y) other Domestic Subsidiaries otherwise described in this clause (B) (each, a "FSHCO") or (C) any equity interests (as determined for U.S. federal income tax purposes) of (1) a direct or indirect Domestic Subsidiary of a direct or indirect Foreign Subsidiary, (2) any direct or indirect Domestic Subsidiary that is treated as a disregarded entity for U.S. federal income tax purposes if substantially all of its assets consists of the Equity Interests or indebtedness (as determined for U.S. federal income tax purposes) of one or more direct or indirect Foreign Subsidiaries, and (3) that are voting equity interests of (x) any Foreign Subsidiary or (y) any FSHCO, in each case, in excess of 65% of the voting equity interests and 100% of the outstanding non-voting equity interests thereof, and (ii) shall not be required to make any pledge, the pledge of which would constitute a violation of law or any contract permitted under this Agreement) and the Collateral Agent shall have received certificates or other instruments (if any) representing all such Equity Interests, together with undated stock powers or other instruments of transfer with respect thereto endorsed in blank;

(c) all Indebtedness for borrowed money of a Subsidiary in excess of $250,000 that is owing to any Loan Party shall be evidenced by a promissory note and shall have been pledged pursuant to the Collateral Agreement, and the Collateral Agent shall have received all such promissory notes and other promissory notes required to be delivered pursuant to the Collateral Agreement, together with undated instruments of transfer with respect thereto; provided, however, that the foregoing delivery requirement with respect to any intercompany indebtedness may be satisfied by delivery of an omnibus or global intercompany note executed by all Loan Parties as payees and all such obligors as payors;

(d) all documents and instruments, including Uniform Commercial Code financing statements and control agreements, required by law or reasonably requested by the Collateral Agent to be executed, filed, registered or recorded to create the Liens intended to be created by the Collateral Agreement and perfect such Liens to the extent required by the Collateral Agreement, shall have been executed, filed, registered or recorded or delivered to the Collateral Agent for filing, registration or recording; and

(e) the Collateral Agent shall have received (i) counterparts of a Mortgage with respect to each Mortgaged Property duly executed and delivered by the record owner of such Mortgaged Property, (ii) a policy or policies of title insurance issued by a nationally recognized title insurance company insuring the Lien of each such Mortgage as a valid senior secured Lien on the Mortgaged Property described therein, free of any other Liens except as expressly permitted by Section 6.02, and such surveys and legal opinions (excluding zoning and land use opinions if the title insurance policy includes a zoning endorsement), completed Federal Emergency Management Agency Standard Flood Hazard Determination with respect to each Mortgaged Property and other documents as the Collateral Agent may reasonably request with respect to any such Mortgage or Mortgaged Property.

Section 1. Notwithstanding anything to the contrary in this Agreement or any Security Document, (i) no Loan Party shall be required to pledge or grant security interests in any Excluded Asset (as defined in the Collateral Agreement) and (ii) no perfection steps or other actions or filings outside of the United States shall be required. The Administrative Agent may grant extensions of time for the perfection of security interests in or the obtaining of title insurance or surveys with respect to particular assets (including

extensions beyond the Effective Date for the perfection of security interests in the assets of the Loan Parties on such date) where it reasonably determines, in consultation with the Borrower, that perfection cannot be accomplished without undue effort or expense by the time or times at which it would otherwise be required by this Agreement or the Security Documents. Notwithstanding the foregoing provisions of this definition or anything in this Agreement or any other Loan Document to the contrary, Liens required to be granted from time to time pursuant to the Collateral and Guarantee Requirement shall be subject to exceptions and limitations set forth in the Security Documents.

"Commitment" means the Term Loan Commitment.

"Commodity Exchange Act" means the Commodity Exchange Act (7 U.S.C. §1 et. seq.), as amended from time to time, and any successor statute.

"Competitors" means any Person who is not an Affiliate of a Loan Party and who engages (or whose Affiliate engages), as its primary business, in the same or similar business as the Permitted Business.

"Confidential Disclosure Letter" means that certain Confidential Disclosure Letter, dated as of the Effective Date, and delivered by the Borrower to the Agents.

"Conforming Changes" means, with respect to either the use or administration of Term SOFR or the use, administration, adoption or implementation of any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of "Base Rate," the definition of "Business Day," the definition of "Interest Period" or any similar or analogous definition (or the addition of a concept of "interest period"), timing and frequency of determining rates and making payments of interest, timing of borrowing requests or prepayment, conversion or continuation notices, the applicability and length of lookback periods, and other technical, administrative or operational matters) that the Administrative Agent decides may be appropriate to reflect the adoption and implementation of any such rate or to permit the use and administration thereof by the Administrative Agent in a manner substantially consistent with market practice (or, if the Administrative Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Administrative Agent determines that no market practice for the administration of any such rate exists, in such other manner of administration as the Administrative Agent decides is reasonably necessary in connection with the administration of this Agreement and the other Loan Documents).

"Control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a Person, whether through the ability to exercise voting power, by contract or otherwise. "Controlling" and "Controlled" have meanings correlative thereto.

"Control Agreement" has the meaning assigned to such term in the Collateral Agreement.

"Credit Party" means each of the Administrative Agent, the Collateral Agent and the Lenders.

"Cure Amount" has the meaning set forth in Section 7.02.

"Cure Right" has the meaning set forth in Section 7.02.

"Declined Proceeds" has the meaning set forth in Section 2.11(l).

"Default" means any event or condition that constitutes an Event of Default or which upon notice, lapse of time or both would, unless cured or waived, become an Event of Default.

"Defaulting Lender" means any Lender that (a) has failed, within two Business Days of the date required to be funded or paid, to (i) fund any portion of its Loans or (ii) pay over to any Credit Party any other amount required to be paid by it hereunder, unless, in the case of clause (i) above, such Lender notifies the Administrative Agent in writing that such failure is the result of such Lender's good faith determination that a condition precedent to funding (specifically identified and including the particular default, if any) has not been satisfied, (b) has notified the Administrative Agent in writing, or has made a public statement to

the effect, that it does not intend or expect to comply with any of its funding obligations under this Agreement or generally under other agreements in which it commits to extend credit, (c) has failed, within three Business Days after request by a Credit Party, acting in good faith, to provide a certification in writing from an authorized officer of such Lender that it will comply with its obligations (and is financially able to meet such obligations) to fund prospective Loans, provided that the Administrative Agent may, by notice to the Borrower and the other Lenders, declare that such Defaulting Lender is no longer a Defaulting Lender pursuant to this clause (c) upon the Administrative Agent's receipt of such certification in form and substance satisfactory to it and the Administrative Agent, (d) has become the subject of a Bankruptcy Event or (e) has become the subject of a Bail-In Action.

"Disposition" has the meaning set forth in Section 6.05.

"Disqualified Equity Interests" means any Equity Interest that, by its terms (or by the terms of any security into which it is convertible, or for which it is exchangeable, in each case, at the option of the holder of the Equity Interest), or upon the happening of any event, matures (excluding any maturity as the result of an optional redemption by the issuer thereof) or is mandatorily redeemable, pursuant to a sinking fund obligation or otherwise, or redeemable at the option of the holder of the Equity Interest, in whole or in part, other than in each case solely in exchange for Qualified Equity Interests (and cash in lieu of fractional shares), on or prior to the date that is 91 days after the Term Loan Maturity Date. Notwithstanding the preceding sentence, (w) any Equity Interest that would constitute Disqualified Equity Interests solely because the holders of the Equity Interest have the right to require the Borrower or the Subsidiary that issued such Equity Interest to repurchase such Equity Interest upon the occurrence of a change of control or an asset sale will not constitute Disqualified Equity Interests if the terms of such Equity Interest provide that the Borrower may not repurchase such Equity Interest unless the Borrower would be permitted to do so in compliance with Section 6.08, (x) any Equity Interest that would constitute Disqualified Equity Interests solely as a result of any redemption feature that is conditioned upon, and subject to, compliance with Section 6.08 will not constitute Disqualified Equity Interests, (y) any Equity Interest issued to any plan for the benefit of employees will not constitute Disqualified Equity Interests solely because it may be required to be repurchased by the Borrower or the Subsidiary that issued such Equity Interest in order to satisfy applicable statutory or regulatory obligations and (z) any class of Equity Interests of such Person that by its terms requires such Person to satisfy its obligations thereunder by delivery of Qualified Equity Interests shall not be deemed to be Disqualified Equity Interests. The amount of Disqualified Equity Interests deemed to be outstanding at any time for purposes of this Agreement will be the maximum amount that the Borrower and its Subsidiaries may become obligated to pay upon the maturity of, or pursuant to any mandatory redemption provisions of, such Disqualified Equity Interests, exclusive of accrued dividends.

"Disqualified Institution" means (a) any competitor of the Borrower or its Subsidiaries identified in writing by or on behalf of the Borrower to (i) the Lead Arranger prior to the Effective Date or (ii) the Administrative Agent from time to time after the Effective Date with the written consent of the Administrative Agent (in its sole discretion), (b) those particular banks, financial institutions, other institutional lenders and other Persons identified by or on behalf of the Borrower to the Lead Arranger in writing (as provided herein) (x) prior to the Effective Date (or related funds of any such Persons) or (y) after the Effective Date with the written consent of the Administrative Agent (in its sole discretion) and (c) any Affiliate of the entities described in the preceding clauses (a) or (b) that are either (w) reasonably identifiable as such on the basis of their name or (x) are identified as such in writing by or on behalf of the Borrower to (i) the Lead Arranger prior to the Effective Date or (ii) the Administrative Agent from time to time after the Effective Date (other than, in each case, Affiliates that constitute bona fide debt funds primarily investing in loans); provided that any Person that is a Lender or a Participant and subsequently becomes a Disqualified Institution (but was not a Disqualified Institution at the time it became a Lender or a Participant, as applicable) shall be deemed to not be a Disqualified Institution hereunder (in the case of any such Participant that is not a Lender, solely with respect to the participations held by such Participant). The identity of Disqualified Institutions may

be disclosed (i) by the Administrative Agent to a Lender upon request and (ii) by any Lender to any prospective Lender, Participant or Eligible Assignee, subject to the acknowledgment and acceptance by such prospective Lender, Participant or Eligible Assignee that the identity of Disqualified Institutions is being disseminated on a confidential basis and that such prospective Lender, Participant or Eligible Assignee shall be bound by the same confidentiality restrictions as those applicable to the Lender making such communication, but will not be otherwise posted or distributed to any Person. Notwithstanding anything to the contrary contained in this Agreement, (a) the Administrative Agent shall not be responsible or have any liability for, or have any duty to ascertain, inquire into, monitor or enforce, compliance with the provisions hereof relating to Disqualified Institutions and (b) the Borrower (on behalf of themselves and the other Loan Parties) and the Lenders acknowledge and agree that the Administrative Agent shall have no responsibility or obligation to determine whether any Lender or potential Lender is a Disqualified Institution and that the Administrative Agent shall have no liability with respect to any assignment or participation made to a Disqualified Institution.

"dollars" or "$" refers to lawful money of the United States of America.

"Domestic Subsidiary" means any Subsidiary incorporated or organized under the laws of the United States of America, any State thereof or the District of Columbia.

"EEA Financial Institution" means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent.

"EEA Member Country" means any of the member states of the European Union, Iceland, Liechtenstein, and Norway.

"EEA Resolution Authority" means any public administrative authority or any Person entrusted with public administrative authority of any EEA Member Country (including any delegee) having responsibility for the resolution of any EEA Financial Institution.

"Effective Date" means September 22, 2022.

"Effective Date Term Lender" means, at any time, any Lender that has an Effective Date Term Loan Commitment or an outstanding Effective Date Term Loan.

"Effective Date Term Loan Commitments" means, with respect to each Effective Date Term Lender, such Effective Date Term Lender's Term Loan Commitment to make an Effective Date Term Loan hereunder on the Effective Date as set forth on Schedule 2.01 opposite such Lender's name under the heading "Effective Date Term Loan Commitment", expressed as an amount representing the maximum principal amount of the Effective Date Term Loan to be made by such Lender hereunder, as such commitment may be reduced or increased from time to time pursuant to this Agreement and as amended to reflect assignments. Unless the context shall otherwise require, the term "Effective Date Term Loan Commitments" shall include any commitment to Replacement Term Loans of such Lender. The aggregate amount of the Effective Date Term Loan Commitments as of the Effective Date is $175,000,000.

"Effective Date Term Loans" has the meaning set forth in Section 2.01(a).

"Eligible Assignee" has the meaning set forth in Section 9.04(a).

"Environmental Laws" means all laws (including the common law), rules, regulations, codes, ordinances, orders, decrees, judgments, injunctions, notices or binding agreements issued, promulgated or entered into by or with any Governmental Authority, relating in any way to pollution or the protection of the environment, preservation or reclamation of natural resources, the presence, management, Release or threatened Release of any Hazardous Material, or to health and safety matters relating to exposure to Hazardous Materials in the workplace.

"Environmental Liability" means liabilities, obligations, damages, claims, actions, suits, judgments, orders, fines, penalties, fees, expenses and costs (including administrative oversight costs, natural resource damages and medical monitoring, investigation or remediation costs), whether contingent or otherwise, arising out of or relating to any actual or alleged failure to comply with Environmental Law, including with respect to (a) the generation, use, handling, transportation, storage, treatment or disposal of any Hazardous Materials, (b) exposure to any Hazardous Materials, or (c) the Release or threatened Release of any Hazardous Materials.

"Environmental Permit" means any permit, approval, identification number, license or other authorization required under any Environmental Law.

"Equity Interests" means shares of capital stock, partnership interests, membership interests in a limited liability company, beneficial interests in a trust or other equity ownership interests in a Person, and any warrants, options or other rights entitling the holder thereof to purchase or acquire any such equity interest from the issuer thereof, but excluding any debt securities convertible into such shares or other such equity interests unless such debt securities are converted into such shares or other such equity interests.

"ERISA" means the Employee Retirement Income Security Act of 1974 and the regulations promulgated thereunder, as amended from time to time.

"ERISA Affiliate" means any trade or business (whether or not incorporated) that, together with the Borrower, is treated as a single employer under Section 414(b) or (c) of the Code, including Section 414(m) and (o) of the Code solely for purposes of Section 412 of the Code and Section 302 of ERISA.

"ERISA Event" means (a) any "reportable event", as defined in Section 4043 of ERISA or the regulations issued thereunder, with respect to a Plan (other than an event for which the 30 day notice period is waived), (b) a failure to satisfy the minimum funding standard under Section 412 of the Code or Section 302 of ERISA, whether or not waived, (c) the filing pursuant to Section 412(c) of the Code or Section 302(c) of ERISA of an application for a waiver of the minimum funding standard with respect to any Plan, (d) the incurrence by the Borrower or any of its ERISA Affiliates of any liability under Title IV of ERISA, other than for PBGC premiums due but not delinquent under Section 4007 of ERISA, with respect to the termination of any Plan, (e) the receipt by the Borrower or any ERISA Affiliate from the PBGC or a plan administrator of any written notice relating to an intention to terminate any Plan or Plans or to appoint a trustee to administer any Plan, (f) the receipt by the Borrower or any ERISA Affiliate of any written notice relating to the incurrence by the Borrower or any of its ERISA Affiliates of any liability with respect to the withdrawal or partial withdrawal from any Plan or Multiemployer Plan, (g) the receipt by the Borrower or any ERISA Affiliate of any written notice, or the receipt by any Multiemployer Plan from the Borrower or any ERISA Affiliate of any written notice, concerning a determination that a Multiemployer Plan is, or is expected to be, insolvent or in reorganization, within the meaning of Title IV of ERISA or that a Multiemployer Plan is in "critical" status within the meaning of Section 432 of the Code or Section 305 of ERISA; or (h) the occurrence of a nonexempt prohibited transaction (within the meaning of Section 4975 of the Code or Section 406 of ERISA) which is reasonably likely to result in a Material Adverse Effect.

"Erroneous Payment" has the meaning specified in Section 8.11(a).

"Erroneous Payment Subrogation Rights" has the meaning specified in Section 8.11(d).

"EU Bail-In Legislation Schedule" means the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor person), as in effect from time to time.

"Event of Default" has the meaning set forth in Section 7.01.

"Excess Net Proceeds" has the meaning set forth in Section 2.11(c).

"Exchange Act" means the Securities Exchange Act of 1934 and the rules and regulations of the SEC promulgated thereunder.

"Excluded Assets" has the meaning set forth in the Collateral Agreement.

"Excluded Swap Obligation" means, with respect to any Guarantor, any Swap Obligation, if, and to the extent that, all or a portion of the Guarantee of such Guarantor of, or the grant by such Guarantor of a security interest to secure, such Swap Obligation (or any Guarantee thereof) is or becomes illegal under the Commodity Exchange Act or any rule, regulation or order of the Commodity Futures Trading Commission (or the application or official interpretation of any thereof) by virtue of such Guarantor's failure for any reason to constitute an "eligible contract participant" as defined in the Commodity Exchange Act at the time the Guarantee of such Guarantor becomes effective with respect to such related Swap Obligation.

"Excluded Taxes" means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient, (a) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (i) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender its applicable lending office located in the jurisdiction imposing such Tax (or any political subdivision thereof) or (ii) that are Other Connection Taxes, (b) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in a Loan or Commitment pursuant to a law in effect on the date on which (i) such Lender acquires such interest in the Loan or Commitment (other than pursuant to an assignment request by the Borrower under Section 2.19(b)) or (ii) such Lender changes its lending office, except in each case to the extent that, pursuant to Section 2.17(a), amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its lending office, (c) Taxes attributable to such Recipient's failure to comply with Section 2.17(f), and (d) any withholding Taxes imposed under FATCA.

"Executive Order" has the meaning set forth in Section 3.17.

"Fair Market Value" means the value that would be paid by a willing buyer to an unaffiliated willing seller in a transaction not involving distress or necessity of either party, determined in good faith by the Board of Directors, chief executive officer or chief financial officer of the Borrower.

"FATCA" means Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof, any agreements entered into pursuant to Section 1471(b)(1) of the Code and any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreements, treaty or convention among Governmental Authorities and implementing such Sections of the Code.

"FDA" means the Federal Food and Drug Administration.

"Federal Funds Rate" means, for any day, the rate calculated by the NYFRB based on such day's federal funds transactions by depositary institutions, as determined in such manner as the NYFRB shall set forth on its public website from time to time, and published on the next succeeding business day by the NYFRB as the federal funds effective rate, provided that if the Federal Funds Rate shall be less than zero, such rate shall be deemed to zero for the purposes of calculating such rate.

"Fee Letter" means the Fee Letter, dated as of the Effective Date, by and between the Administrative Agent the Lead Arranger, the Borrower and the Lenders party thereto.

"Financial Officer" means the chief financial officer, chief executive officer, principal accounting officer, treasurer or controller of the Borrower (or other officer with equivalent duties), in each case in his or her capacity as such.

"Financial Performance Covenants" means the covenants of the Borrower set forth in Section 6.12.

"First Amendment" means that certain Limited Waiver and First Amendment to Credit Agreement, dated as of the First Amendment Effective Date, by and among the Borrower, the other Loan Parties party thereto, Administrative Agent, Lead Arranger, Sole Bookrunner and the Lenders party thereto (including, for the avoidance of doubt, the First Amendment Effective Date Term Lenders).

"First Amendment Effective Date" means April ~~1~~25, 2023.

"First Amendment Effective Date Term Lender" means, at any time, any Lender that has a First Amendment Effective Date Term Loan Commitment or an outstanding First Amendment Effective Date Term Loan.

"First Amendment Effective Date Term Loan Commitments" means, with respect to each First Amendment Effective Date Term Lender, such First Amendment Effective Date Term Lender's Term Loan Commitment to make a First Amendment Effective Date Term Loan hereunder on the First Amendment Effective Date as set forth on Schedule 2.01 opposite such Lender's name under the heading "First Amendment Effective Date Term Loan Commitment", expressed as an amount representing the maximum principal amount of the First Amendment Effective Date Term Loan to be made by such Lender hereunder, as such commitment may be reduced or increased from time to time pursuant to this Agreement and as amended to reflect assignments. Unless the context shall otherwise require, the term "First Amendment Effective Date Term Loan Commitments" shall include any commitment to Replacement Term Loans of such Lender. The aggregate amount of the First Amendment Effective Date Term Loan Commitments as of the First Amendment Effective Date is $50,000,000.

"First Amendment Effective Date Term Loans" has the meaning set forth in Section 2.01(b).

"First Amendment Make Whole/Prepayment Fee Amount" has the meaning set forth in Section 2.12(c)(i).

"Floor" means a rate of interest equal to 1.00%.

"Foreign Lender" means any Lender that is organized under the laws of a jurisdiction other than that in which the Borrower is located. For purposes of this definition, the United States of America, each State thereof and the District of Columbia shall be deemed to constitute a single jurisdiction.

"Foreign Subsidiary" means any Subsidiary that is not a Domestic Subsidiary.

"GAAP" means generally accepted accounting principles in the United States of America set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as have been approved by a significant segment of the accounting profession, which are in effect from time to time; provided, however, that if the Borrower notifies the Administrative Agent that the Borrower requests an amendment to any provision hereof to eliminate the effect of any change occurring after the Effective Date in GAAP or in the application thereof on the operation of such provision (or if the Administrative Agent notifies the Borrower that the Required Lenders request an amendment to any provision hereof for such purpose), regardless of whether any such notice is given before or after such change in GAAP or in the application thereof, then, upon the prior written consent of the Administrative Agent, such provision shall be interpreted on the basis of GAAP as in effect and applied immediately before such change shall have become effective until such notice shall have been withdrawn or such provision amended in accordance herewith. Notwithstanding any other provision contained herein, (a) all terms of an accounting or financial nature used in this Agreement shall be construed, and all computations of amounts and ratios referred to in this Agreement shall be made without giving effect to any election under Accounting Standards Codification Topic 825—Financial Instruments, or any successor thereto or comparable accounting principle (including pursuant to the Accounting Standards Codification), to value any Indebtedness of the Borrower or any Subsidiary at "fair value," as defined therein and (b) the amount of any Indebtedness under GAAP with respect to Capital Lease Obligations shall be determined in accordance with the definition of Capital Lease Obligations.

"Google Note" means that certain Convertible Promissory Note, dated as of June 22, 2020, issued by the Borrower to Google LLC.

"Governmental Authority" means the government of the United States of America, any other nation or any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government, any securities exchange and any self-regulatory organization (including the National Association of Insurance Commissioners). For avoidance of doubt, the term Governmental Authority includes any and all Public Health Regulatory Agencies.

"Guarantee" of or by any Person (the "guaranteeing person") means any obligation, contingent or otherwise, of the guaranteeing person guaranteeing or having the economic effect of guaranteeing any Indebtedness or other obligation of any other Person (the "primary obligor") in any manner, whether directly or indirectly, and including any obligation of the guaranteeing person, direct or indirect, (a) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other obligation or to purchase (or to advance or supply funds for the purchase of) any security for the payment thereof, (b) to purchase or lease property, securities or services for the purpose of assuring the owner of such Indebtedness or other obligation of the payment thereof, (c) to maintain working capital, equity capital or any other financial statement condition or liquidity of the primary obligor so as to enable the primary obligor to pay such Indebtedness or other obligation or (d) as an account party or applicant in respect of any letter of credit or letter of guaranty issued to support such Indebtedness or obligation, provided that the term "Guarantee" shall not include endorsements for collection or deposit in the ordinary course of business, customary and reasonable indemnity obligations in effect on the Effective Date or entered into in connection with any acquisition or disposition of assets permitted under this Agreement (other than such obligations with respect to Indebtedness) or product warranty obligations. The amount of any Guarantee of any guaranteeing person shall be deemed to be the lower of (a) an amount equal to the stated or determinable amount of the primary obligation in respect of which the Guarantee is made and (b) the maximum amount for which such guaranteeing person may be liable pursuant to the terms of the instrument embodying such Guarantee.

"Guarantors" means the collective reference to the Subsidiary Loan Parties.

"Hazardous Materials" means all explosive, radioactive, infectious, chemical, biological, medical or toxic materials, and all other chemicals, materials, substances, wastes, pollutants or contaminants in any form, including petroleum or petroleum byproducts, asbestos or asbestos-containing materials, polychlorinated biphenyls, radon gas and all other materials, substances or wastes of any nature, in each case to the extent regulated pursuant to any Environmental Law.

"Health Care Laws" means all applicable federal and state laws, rules or regulations pertaining to clinical laboratory services, including (i) the federal Anti-Kickback Statute (42 U.S.C. §1320a-7b(b)), Sections 1320a-7 and 1320a-7a of Title 42 of the United States Code, the Physician Self- Referral Law, commonly known as the "Stark Law" (42 U.S.C. §§ 1395nn and 1396(s)), the Civil Monetary Penalties Law, including without limitation the Beneficiary Inducement Statute (42 U.S.C. § 1320a-7a), the civil False Claims Act (31 U.S.C. §3729 et seq.), or any regulations promulgated pursuant to such statutes, or similar state or local statutes or regulations; (ii) the Health Insurance Portability and Accountability Act of 1996 (Pub. L. No. 104-191) as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, (42 U.S.C. § 17921, et seq.) and the regulations promulgated thereunder and similar state or local statutes or regulations governing the privacy or security of patient information (collectively, "HIPAA"); (iii) Medicare (Title XVIII of the Social Security Act) and the regulations promulgated thereunder; (iv) Medicaid (Title XIX of the Social Security Act) and the regulations promulgated thereunder as well as comparable state Medicaid statutes and regulations; (v) all applicable licensure, permitting or certification laws and regulations and (vi) any and all other applicable federal and state clinical laboratory services laws, rules and regulations, including those related to the submission of false claims, fee-splitting, kickbacks, and self-referrals.

"Indebtedness" of any Person means, without duplication, (a) all obligations of such Person for borrowed money, (b) all obligations of such Person evidenced by bonds, debentures, notes or similar instruments, (c) all obligations of such Person under conditional sale or other title retention agreements relating to property acquired by such Person, (d) all obligations of such Person in respect of the deferred purchase price of property or services (excluding trade accounts payable and accrued obligations incurred in the ordinary course of business), (e) all obligations of others secured by (or for which the holder of such obligations has an existing right, contingent or otherwise, to be secured by) any Lien on property owned or acquired by such Person, whether or not the obligations secured thereby have been assumed, but limited, in the event such secured obligations are nonrecourse to such Person, to the fair value of such property, (f) all Guarantees by such Person of the Indebtedness of any other Person, (g) all Capital Lease Obligations of such Person, (h) the face amount of all letters of credit issued for the account of such Person to the extent drawn and unreimbursed and all reimbursement or payment obligations with respect to surety bonds and other similar instruments issued by such Person, (i) all obligations, contingent or otherwise, of such Person in respect of bankers' acceptances and (j) all Disqualified Equity Interests of such Person valued, as of the date of determination, at the greater of (i) the maximum aggregate amount that would be payable upon maturity, redemption, repayment or repurchase thereof (or of Disqualified Equity Interests or Indebtedness into which such Disqualified Equity Interests is convertible or exchangeable) and (ii) the maximum liquidation preference of such Disqualified Equity Interests (excluding accrued dividends that have not increased the liquidation preference of such Disqualified Equity Interests). The Indebtedness of any Person shall include the Indebtedness of any other entity (including any partnership in which such Person is a general partner) to the extent such Person is liable therefor as a result of such Person's ownership interest in or other relationship with such entity, except to the extent the terms of such Indebtedness provide that such Person is not liable therefor. Notwithstanding the foregoing, the term "Indebtedness" shall not include (i) post-closing payment adjustments, earn-outs or non-compete payments to which the seller in any Permitted Acquisition is or may become entitled until such obligations are due and payable, (ii) amounts that any member of management, the employees or consultants of the Borrower or any of the Subsidiaries may become entitled to under any cash incentive plan in existence from time to time (iii) contingent obligations incurred in the ordinary course of business or in respect of operating leases and not in respect of borrowed money, (iv) deferred or prepaid revenues, (v) purchase price holdbacks in respect of a portion of the purchase price of an asset to satisfy warranty or other unperformed obligations of the respective seller, (vi) current liabilities due to affiliates in connection with cash management arrangements in the ordinary course of business, or (vii) Non-Financing Lease Obligations.

"Indemnified Taxes" means Taxes other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of any Loan Party under any Loan Document.

"Indemnitee" has the meaning set forth in Section 9.03(b).

"Information" has the meaning set forth in Section 9.12.

"Interest Election Request" means a written request by the Borrower to convert or continue a Term Loan Borrowing in accordance with Section 2.07, provided that a written Interest Election Request shall be substantially in the form of Exhibit F, or such other form as shall be approved by the Administrative Agent.

"Interest Payment Date" means (a) with respect to any Base Rate Loan, the last Business Day of each March, June, September and December and (b) with respect to any SOFR Loan, the last day of the Interest Period applicable to the Borrowing of which such Loan is a part.

"Interest Period" means, with respect to any SOFR Borrowing, the period commencing on the date of such Borrowing and ending on the numerically corresponding day in the calendar month that is three months thereafter, provided that (a) if any Interest Period would end on a day other than a Business Day, such

Interest Period shall be extended to the next succeeding Business Day unless such next succeeding Business Day would fall in the next calendar month, in which case such Interest Period shall end on the next preceding Business Day, (b) any Interest Period that commences on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the last calendar month of such Interest Period) shall end on the last Business Day of the last calendar month of such Interest Period (c) no Interest Period applicable to a Term Loan or a portion thereof shall extend beyond any date upon which any scheduled principal payment in respect of such Term Loan is due unless the aggregate principal amount of such Term Loan represented by Base Rate Borrowings or SOFR Borrowings having Interest Periods that will expire on or prior to such date is equal to or in excess of the amount of such principal payment, (d) no tenor removed from this definition pursuant to Section 2.14 shall be available and (e) no Interest period shall extend beyond the Term Loan Maturity Date. For purposes hereof, the date of a Borrowing initially shall be the date on which such Borrowing is made and thereafter shall be the effective date of the most recent conversion or continuation of such Borrowing.

"Investment" means with respect to any Person, all direct or indirect investments by such Person in other Persons (including Affiliates) in the forms of loans (including Guarantees or other obligations), advances or capital contributions (excluding accounts receivable, trade credit, advances to customers, current receivables due from affiliates in connection with cash management arrangements and commission, travel, relocation and similar advances to officers and employees, in each case made in the ordinary course of business), purchases or other acquisitions for consideration of Indebtedness, Equity Interests or other securities, together with all items that are or would be classified as investments on a balance sheet prepared in accordance with GAAP. For purposes of covenant compliance, the amount of any Investment at any time shall be the amount actually invested (measured at the time made), without adjustment for subsequent changes in the value of such Investment, net of any dividend, distribution, interest payment, return of capital, repayment or other amount received in cash by the Borrower or a Subsidiary in respect of such Investment.

"IP Rights" has the meaning set forth in Section 3.19.

"IPO" means a bona fide underwritten initial public offering of Equity Interests of the Borrower or any direct or indirect parent of the Borrower after the Effective Date.

"Lenders" means the banks and other financial institutions or entities from time to time parties to this Agreement (including any Person that shall have become a party hereto pursuant to an Assignment and Assumption) other than any such Person that ceases to be a party hereto pursuant to an Assignment and Assumption.

"Liabilities" shall mean any and all Indebtedness, Taxes, liabilities, and obligations, whether known or unknown, accrued or fixed, or absolute or contingent, matured or unmatured or determined or reasonably determinable.

"Lien" means, with respect to any asset, (a) any mortgage, deed of trust, lien, pledge, hypothecation, encumbrance, charge or security interest in, on or of such asset or other arrangement to provide priority or preference with respect to such asset or (b) the interest of a vendor or a lessor under any conditional sale agreement, capital lease or title retention agreement (or any financing lease having substantially the same economic effect as any of the foregoing) relating to such asset; provided that in no event shall an operating lease in and of itself be deemed a Lien.

"Liquidity" means, at any time, the sum of unrestricted cash and cash equivalents of the Borrower plus the unrestricted cash and cash equivalents of the Subsidiaries (all of the outstanding Equity Interests of which are owned, directly or indirectly, by the Borrower) of the Borrower with respect to which the Administrative Agent has a first priority perfected Lien pursuant to a Control Agreement.

"Loan Documents" means this Agreement, the promissory notes, if any, executed and delivered pursuant to Section 2.09(e), the Fee Letter, the Collateral Agreement and the other Security Documents.

"Loan Parties" means the Borrower and the Subsidiary Loan Parties.

"Loans" means the Term Loans made by the Lenders to the Borrower pursuant to this Agreement.

"Make Whole/Prepayment Fee Amount" has the meaning set forth in Section 2.12(c)(ii).

"Make-Whole Premium" means:

~~"Make-Whole Premium" means,~~ (x) with respect to any prepayment of Term Loans~~,~~ (other than the Second Amendment Effective Date Term Loans), the excess of (a) the "present value" as of the date of such prepayment of (i) the prepayment price of the Term Loans (other than the Second Amendment Effective Date Term Loans) being prepaid at the first anniversary of the First Amendment Effective Date ~~(i.e.~~, in the amount of 105% of the principal amount of the Term Loans (other than the Second Amendment Effective Date Term Loans) being prepaid~~)~~, (ii) the amount of interest that would have been payable on the aggregate principal amount of the Term Loans (other than the Second Amendment Effective Date Term Loans) being prepaid, repaid, or accelerated if such principal amount had been outstanding from the date of prepayment, repayment, or acceleration through the first anniversary of the First Amendment Effective Date (excluding interest accrued prior to such prepayment date) over (b) the principal amount of the Term Loans (other than the Second Amendment Effective Date Term Loans) being prepaid; provided that the Make-Whole Premium applicable to the Term Loans (other than the Second Amendment Effective Date Term Loans) may in no event be less than zero~~.~~; and

(y) with respect to any prepayment of the Second Amendment Effective Date Term Loans, the excess of (a) the "present value" as of the date of such prepayment of (i) the prepayment price of the Second Amendment Effective Date Term Loans being prepaid at the first anniversary of the Second Amendment Effective Date, in the amount of 105% of the principal amount of the Second Amendment Effective Date Term Loans being prepaid, (ii) the amount of interest that would have been payable on the aggregate principal amount of the Second Amendment Effective Date Term Loans being prepaid, repaid, or accelerated if such principal amount had been outstanding from the date of prepayment, repayment, or acceleration through the first anniversary of the Second Amendment Effective Date (excluding interest accrued prior to such prepayment date) over (b) the principal amount of the Second Amendment Effective Date Term Loans being prepaid; provided that the Make-Whole Premium applicable to the Second Amendment Effective Date Term Loans may in no event be less than zero.

For purposes of this definition, "present value" with respect to each of clauses (x)(a)(i), (x)(a)(ii), (y)(a)(i) and (y)(a)(ii) hereof shall be computed using a discount rate applied quarterly equal to the Treasury Rate as of such prepayment date *plus* 50 basis points. For the avoidance of doubt, (i) all PIK Interest capitalized to principal of the Term Loans is to be included in the Make-Whole Premium, and (ii) the calculation of interest in clause (x)(a)(ii) and (y)(b)(ii) above shall be calculated without PIK Interest for any period for which the Borrower has exercised the Cash Election.

~~"Make Whole/Prepayment Fee Amount" has the meaning set forth in Section 2.12(c).~~

"Material Adverse Effect" means a material adverse effect on (a) the business, operations, assets, properties, contingent liabilities or financial condition of the Borrower and its Subsidiaries, taken as a whole, (b) the ability of any Loan Party to perform any obligation under any Loan Document or (c) the rights of or benefits available to the Lenders and Agents under any Loan Document or the ability of the Agents and the Lenders to enforce the Loan Documents.

"Material Indebtedness" means Indebtedness (other than the Loans), or obligations in respect of one or more Swap Agreements, of any one or more of the Loan Parties in an aggregate principal amount exceeding $10,000,000. For purposes of determining Material Indebtedness, the "principal amount" of the obligations of any Loan Party in respect of any Swap Agreement at any time shall be the maximum aggregate amount (giving effect to any netting agreements) that such Loan Party would be required to pay if such Swap Agreement were terminated at such time.

"Material Real Property" means (i) the real property owned by any Loan Party identified on Schedule 3.05, and (ii) any other real estate owned (but not leased) by a Loan Party located in the United States having a Fair Market Value in excess of $5,000,000.

"Material Regulatory Liabilities" means (i) any claims, actions, suits, judgments, damages, losses, liability, fines or penalties arising from the violation of Public Health Laws, other applicable laws, or the terms, conditions of or requirements applicable to any Registrations (including costs of actions required under applicable law, including Public Health Laws, or necessary to remedy any violation of any terms or conditions applicable to any Registrations) and (ii) any net loss of recurring annual revenues as a result of any loss, suspension or limitation of any Registrations, which, in the case of the foregoing clauses (i) and (ii), exceeds $10,000,000, individually or in the aggregate.

"Maximum Rate" has the meaning set forth in Section 9.13.

"Minimum Liquidity Amount" has the meaning set forth in Section 6.12(a).

"Monthly Financial Statements" means the unaudited consolidated balance sheets and related statements of income and cash flows of the Borrower for each month ended after July 31, 2022 and at least thirty (30) days prior to the Effective Date.

"Moody's" means Moody's Investors Service, Inc.

"Mortgage" means a mortgage, deed of trust, assignment of leases and rents or other security document granting a Lien on any Mortgaged Property to secure the Obligations. Each Mortgage shall be reasonably satisfactory in form and substance to the Collateral Agent.

"Mortgaged Property" means each parcel of or other interests in real property owned by a Loan Party and improvements thereto owned by a Loan Party with respect to which a Mortgage is granted pursuant to Section 4.01, 5.12 or 5.13. In no event shall Mortgaged Property include, nor shall any Loan Party be obligated to grant a Mortgage with respect to any property that does not constitute Material Real Property.

"Multiemployer Plan" means a multiemployer plan as defined in Section 4001(a)(3) of ERISA, to which the Borrower or any ERISA Affiliate makes or is obligated to make contributions.

"Net Proceeds" means, with respect to any event, (a) the cash proceeds actually received in respect of such event including (i) any cash received in respect of any non-cash proceeds (including any cash payments received by way of deferred payment of principal pursuant to a note or installment receivable or purchase price adjustment receivable or otherwise, but excluding any interest payments), but only as and when received, (ii) in the case of a casualty, insurance proceeds but only as and when received and (iii) in the case of a condemnation or similar event, condemnation awards and similar payments actually received, net of (b) the sum of (i) all reasonable fees and out-of-pocket expenses paid to third parties in connection with such event (including reasonable and documented attorney's fees, investment banking fees, survey costs, title insurance premiums, and related search and recording charges, transfer taxes, deed or mortgage recording taxes, underwriting discounts and commissions, other customary expenses and brokerage, consultant, accountant and other customary fees), (ii) in the case of a sale, transfer or other disposition of an asset (including pursuant to a sale and leaseback transaction or a casualty or a condemnation or similar proceeding), (X) the amount of all payments required to be made as a result of such event to repay Indebtedness (other than Loans) secured by such asset, in the case of any such sale, transfer or other disposition of an asset of a Subsidiary that is not a Guarantor, the amount of any repayments of Indebtedness of such Subsidiary other than intercompany Indebtedness made with the proceeds of such sale, transfer or other disposition and (Y) in the event that a Subsidiary makes a pro rata payment of dividends to all of its stockholders from any cash proceeds, the amount of dividends paid to any stockholder other than the Borrower or any other Subsidiary; provided that any cash proceeds of a sale, transfer or other disposition of an asset by a Subsidiary that is not a Subsidiary Loan Party that are subject to legal or contractual restrictions on repatriation to the Borrower will not be considered Net Proceeds for so long as such proceeds

are subject to such restrictions; provided, however, that any such contractual restrictions on repatriation were not entered into in contemplation of such sale, transfer or other disposition of assets and (iii) the amount of all Taxes paid (or reasonably estimated to be payable), including any withholding taxes and other taxes reasonably estimated to be payable in connection with the repatriation of such Net Proceeds from a Foreign Subsidiary (or through a chain of Foreign Subsidiaries and Domestic Subsidiaries) and the amount of any reserves established to fund liabilities reasonably estimated to be payable, in each case during the year that such event occurred, the next succeeding year, or any year in which an installment payment in connection with such event is received and that, in each case, are directly attributable to such event (as determined reasonably and in good faith by a Financial Officer).

"Non-Consenting Lender" has the meaning set forth in Section 9.02(b).

"Non-Financing Lease Obligation" means a lease obligation that is not required to be accounted for as a financing or capital lease on both the balance sheet and the income statement for financial reporting purposes in accordance with GAAP (including, without limitation, FASB ASC 842). For the avoidance of doubt, a straight-line or operating lease shall be considered a Non- Financing Lease Obligation.

"Not Otherwise Applied" means, with reference to the amount of any capital contributions, Net Proceeds from the issuance of Equity Interests that is proposed to be applied to a particular use or transaction, that such amount was not previously applied in determining the permissibility of a transaction under the Loan Documents where such permissibility was (or may have been) contingent on the receipt or availability of such amount.

"Note" means the collective reference to any promissory note evidencing Loans.

"NPL" means the National Priorities List under CERCLA.

"NYFRB" means the Federal Reserve Bank of New York.

"Obligations" has the meaning set forth in the Collateral Agreement and shall include any Make Whole/Prepayment Fee Amount and Erroneous Payment Subrogation Rights.

"OFAC" has the meaning set forth in Section 3.17.

"Other Connection Taxes" means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax other than connections arising solely from (and that would not have existed but for) such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Loan or Loan Document.

"Other Taxes" means any and all present or future recording, stamp, documentary, transfer, sales, property or similar Taxes, charges or levies arising from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment (other than an assignment made pursuant to Section 2.19(b)).

"Participant" has the meaning set forth in Section 9.04(e).

"Participant Register" has the meaning set forth in Section 9.04(e).

"Payment Recipient" has the meaning specified in Section 8.11(a).

"PBGC" means the Pension Benefit Guaranty Corporation referred to and defined in ERISA and any successor entity performing similar functions.

"Perfection Certificate" means a certificate in the form of Exhibit D or any other form approved by the Collateral Agent.

"Periodic Term SOFR Determination Day" has the meaning set forth in the definition of "Term SOFR".

"Permitted Acquisition" means purchases or other acquisitions by the Borrower or any of its Subsidiaries of the Equity Interests in a Person that, upon the consummation thereof, will be a Subsidiary of the Borrower (including as a result of a merger or consolidation) or all or substantially all of the assets of, or assets constituting one or more business units of, any Person that, upon the consummation thereof, will constitute assets of the Borrower or a Subsidiary of the Borrower; provided that, with respect to each such purchase or other acquisition:

(a) all transactions related to such purchase or acquisition shall be consummated in all material respects in accordance with all applicable laws;

(b) in the case of any acquisition the aggregate upfront consideration for which exceeds $10,000,000, the Borrower shall (i) give the Administrative Agent at least ten (10) Business Days' (or such later date as is satisfactory to the Administrative Agent) prior written notice of any such purchase or acquisition and (ii) provide the Administrative Agent with a diligence memorandum in reasonable detail, historical financial statements and reports, and a buy-side quality of earnings report if applicable (and if such consideration equals or is less than $10,000,000, the Borrower shall provide the Administrative Agent with items described in this clause (ii) in any event to the extent available);

(c) in the case of any acquisition the aggregate upfront consideration for which exceeds $10,000,000, the Borrower shall provide to the Administrative Agent drafts of the acquisition documents at least five (5) Business Days prior to the closing of such acquisition or such shorter period as is satisfactory to the Administrative Agent (with updates and executed copies thereof provided to Administrative Agent as soon as available);

(d) the Borrower shall provide to the Administrative Agent as soon as available but in any event not later than five (5) Business Days (or such later date as is satisfactory to the Administrative Agent in its sole discretion) after the execution thereof, a copy of any executed purchase agreement or similar agreement with respect to any such purchase or acquisition;

(e) any such newly-created or acquired Subsidiary, or the Borrower or any Subsidiary that is the acquirer of assets in connection with an asset acquisition, shall comply with all applicable requirements under Sections 5.12 and 5.13 (subject to any applicable grace period set forth therein), as applicable;

(f) immediately before and after giving effect to any such purchase or other acquisition and any Indebtedness assumed or incurred in connection therewith, no Specified Event of Default shall have occurred and be continuing;

(g) immediately after giving effect to any such purchase or other acquisition, the Borrower shall be in compliance with the Financial Performance Covenants;

(h) the aggregate amount of the consideration paid in connection with all such Permitted Acquisitions consummated from and after the Effective Date shall not exceed $50,000,000 (minus all amounts expended in reliance on Section 6.04(a)(iv), Section 6.04(a)(xv), Section 6.08(a)(vi), Section 6.08(b)(ii) and Section 6.08(b)(iii)), plus the Available Basket Amount; provided, that the aggregate amount of the consideration paid in connection with targets (including assets of targets) that do not become Guarantors or assets that do not become Collateral shall not exceed $5,000,000;

(i) no Indebtedness or Liens are assumed or incurred in connection with any such purchase or acquisition, other than Indebtedness assumed in connection therewith (and not incurred in connection therewith or incurred in contemplation thereof) to the extent constituting Capital Lease Obligations, purchase money Indebtedness or letters of credit and otherwise permitted by the terms of Section 6.01 and related liens otherwise permitted by Section 6.02; and

(j) the proposed acquisition is consensual (not "hostile") and, if applicable, has been approved by the acquisition target's Board of Directors.

"Permitted Business" means (i) any business engaged in by the Borrower or any of its Subsidiaries on the Effective Date and (ii) any business or other activities that are reasonably similar, ancillary, complementary or related to, or a reasonable extension, development or expansion of, such businesses.

"Permitted Encumbrances" means:

(a) Liens imposed by law for taxes that are not yet due or are being contested in compliance with Section 5.05;

(b) carriers', warehousemen's, mechanics', materialmen's, repairmen's, construction contractors and other like Liens imposed by law, arising in the ordinary course of business and securing obligations that are not overdue by more than 30 days or that are being contested in good faith;

(c) (i) pledges and deposits made in the ordinary course of business in compliance with workers' compensation, unemployment insurance and other social security laws or regulations and (ii) pledges and deposits in the ordinary course of business securing liability for reimbursement or indemnification obligations of (including obligations in respect of letters of credit or bank guarantees for the benefit of) insurance carriers providing property, casualty or liability insurance to the Borrower or any Subsidiary;

(d) deposits to secure the performance of bids, trade contracts, government contracts, leases, statutory obligations, surety, stay, customs and appeal bonds, performance bonds and other obligations of a like nature (including those to secure health, safety and environmental obligations);

(e) judgment liens in respect of judgments that do not constitute an Event of Default under Section 7.01(k);

(f) easements, zoning restrictions, rights-of-way, encroachments, protrusions, minor defects or irregularities of title and other similar encumbrances on real property imposed by law or arising in the ordinary course of business that do not secure any monetary obligations and do not either detract from the value of the affected property or interfere with the ordinary conduct of business of the Borrower or any Subsidiary, in each case in any material respect;

(g) landlords' and lessors' and other like Liens in respect of rent not in default;

(h) any Liens shown on the title insurance policies in favor of the Collateral Agent insuring the Liens of the Mortgages;

(i) leases, licenses, subleases or sublicenses, in each case in the ordinary course of business and which do not materially interfere with the business of the Borrower and the Subsidiaries;

(j) Liens securing the Obligations;

(k) Liens in favor of customs and revenue authorities arising as a matter of law and in the ordinary course of business to secure payment of customs duties in connection with the importation of goods; and

(l) any option or other agreement to purchase any asset of the Borrower or any of its Subsidiaries, the purchase, sale or other disposition of which is not prohibited by this Agreement;

Section 2. provided that the term "Permitted Encumbrances" shall not include any Lien securing Indebtedness.

"Permitted Holders" means Eric Lefkofsky, Brad Keywell and Kimberly Keywell, together with their Affiliates, estates and trusts.

"Permitted Investments" means:

(a) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America (or by any agency thereof to the extent such obligations are backed by the full faith and credit of the United States of America), in each case maturing within one year from the date of acquisition thereof;

(b) investments in commercial paper maturing within 365 days from the date of acquisition thereof and having, at such date of acquisition, a credit rating from S&P or Moody's of at least A2 or P2, respectively;

(c) investments in certificates of deposit, banker's acceptances and time deposits maturing within 365 days from the date of acquisition thereof issued or guaranteed by or placed with, and money market deposit accounts issued or offered by, any domestic office of any commercial bank organized under the laws of the United States of America or any State thereof that has a combined capital and surplus and undivided profits of not less than $500,000,000;

(d) fully collateralized repurchase agreements with a term of not more than 30 days for securities described in clause (a) above and entered into with a financial institution satisfying the criteria described in clause (c) above;

(e) investments in money market funds that comply with the criteria set forth in SEC Rule 2a-7 under the Investment Company Act of 1940, as amended, substantially all of whose assets are invested in investments of the type described in clauses (a) through (e) above; and

(f) investments permitted by the Borrower's Board of Director approved investment policy as approved from time to time by the Administrative Agent in its sole discretion.

"Permitted Refinancing" means, with respect to any Person, any modification, refinancing, refunding, renewal, replacement or extension of any Indebtedness of such Person; provided that (a) the principal amount (or if issued with original issue discount, the issue price) thereof does not exceed the principal amount (or if issued with original issue discount, the accreted value) of the Indebtedness so modified, refinanced, refunded, renewed, replaced or extended except by an amount equal to unpaid accrued interest (including capitalized interest) and premium thereon plus other amounts owing or paid related to such Indebtedness, and fees, premiums, penalties and expenses (including any upfront fees and original issue discount) reasonably incurred, in connection with such modification, refinancing, refunding, renewal, replacement or extension and by an amount equal to any existing commitments unutilized thereunder, (b) other than with respect to a Permitted Refinancing in respect of Indebtedness permitted pursuant to clause (vi) of Section 6.01(a), such modification, refinancing, refunding, renewal, replacement or extension has a final maturity date equal to or later than the final maturity date of, and has a weighted average life to maturity equal to or greater than the weighted average life to maturity of, the Indebtedness being modified, refinanced, refunded, renewed, replaced or extended, (c) other than with respect to a Permitted Refinancing in respect of Indebtedness permitted pursuant to clause (vi) of Section 6.01(a), at the time thereof, no Event of Default shall have occurred and be continuing and (d) if such Indebtedness being modified, refinanced, refunded, renewed, replaced or extended is Subordinated Indebtedness, to the extent such Indebtedness being modified, refinanced, refunded, renewed, replaced or extended is subordinated in right of payment to the Obligations, such modification, refinancing, refunding, renewal, replacement or extension is subordinated in right of payment to the Obligations on terms at least as favorable to the Lenders as those contained in the documentation governing the Indebtedness being modified, refinanced, refunded, renewed, replaced or extended, and such modification, refinancing, refunding, renewal, replacement or extension is incurred by one or more Persons who is an obligor of the Indebtedness being modified, refinanced, refunded, renewed, replaced or extended.

"Person" means any natural person, corporation, limited liability company, trust, joint venture, association, company, partnership, Governmental Authority or other entity.

"PIK Election" has the meaning specified in Section 2.13(f).

"PIK Interest" has the meaning specified in Section 2.13(a).

"Plan" means any employee pension benefit plan (as defined in Section 3(2) of ERISA) subject to the provisions of Title IV or Section 302 of ERISA or Section 412 of the Code, and in respect of which the Borrower or any ERISA Affiliate is (or, if such plan were terminated, would under Section 4069 of ERISA be deemed to be) an "employer" as defined in Section 3(5) of ERISA.

"Prepayment Event" means:

(a) any sale, transfer or other disposition of any property or asset of the Borrower or any Subsidiary resulting in Net Proceeds in excess of $5,000,000 (in any single transaction or series of related transactions), other than dispositions described in clauses (a), (b), (c), (d), (e), (f), (h), (k), (l), (n), (o) and (p) of Section 6.05; or

(b) any casualty or other insured damage to, or any taking under power of eminent domain or by condemnation or similar proceeding of, any property or asset of the Borrower or any Subsidiary resulting in Net Proceeds in excess of $5,000,000 with respect to such event; or

(c) the incurrence or issuance by the Borrower or any Subsidiary of any Indebtedness, other than Indebtedness permitted under Section 6.01, or as otherwise permitted by the Required Lenders in accordance with Section 9.02.

"Prime Rate" means the rate of interest from time to time announced by The Wall Street Journal as its prime commercial lending rate (it being understood that such prime commercial rate is a reference rate and does not necessarily represent the lowest or best rate being quoted by The Wall Street Journal).

"Pro Forma Financial Statements" means the pro forma consolidated balance sheet of the Borrower and the Subsidiaries as the last day of the month of the most recently ended for which Monthly Financial Statements have been delivered, prepared after giving effect to the Transactions as if the Transactions had occurred as of such date; provided that (i) such pro forma consolidated balance sheet shall be prepared in good faith by the Borrower and (ii) such pro forma consolidated balance sheet shall not be required to include adjustments for purchase accounting (including adjustments of the type contemplated by Financial Accounting Standards Board Accounting Standards Codification 805, Business Combinations (formerly SFAS 141R)).

"Projections" means the model delivered by the Borrower as of June 14, 2022 (as adjusted for changes reasonably agreed with the Administrative Agent).

"Proposed Change" has the meaning set forth in Section 9.02(b).

"Public Health Laws" means any and all federal, state, local, foreign and international laws and any and all standards incorporated therein by reference, where compliance with such standards is required under such laws, relating to the procurement, development, manufacture, production, analysis, evaluation, distribution, dispensing, administration, importation, exportation, use, handling, quality, sale, pricing, reimbursement, or promotion of any food, drug, biological, gene therapy product, medical device, tissue- or cell-based product, or similar product (including any ingredient or component of such products) or of any other product or activity subject to regulation under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act, the Controlled Substances Act, or similar federal, state, local, foreign and international law (including laws governing controlled substances, pharmacy, wholesale and other distribution activities, research animal welfare, poison prevention packaging, tamper resistant packaging and consumer product safety). Without limiting the generality of the foregoing, Public Health Laws shall include the federal Food, Drug and Cosmetic Act, 21. U.S.C. § 301 et seq., and implementing regulations, all legally binding ethical standards relating to human subject research and clinical trials, including without limitation the Federal Policy for the Protection of Human Subjects, 45 C.F.R. part 46, and all other related state, local and foreign laws.

"Public Health Regulatory Agency" means an authority or agency responsible for the implementation of a Public Health Law. The term Public Health Regulatory Agency includes, without limitation, the U.S. Food and Drug Administration, the European Commission, the European Medicines Agency and any national competent regulatory authority in the European Union.

"Qualified Equity Interests" means any Equity Interests that are not Disqualified Equity Interests.

"Recipient" (a) the Administrative Agent, (b) the Collateral Agent and (c) any Lender, as applicable.

"Refinanced Term Loans" has the meaning set forth in 9.02(c).

"Register" has the meaning set forth in Section 9.04(d).

"Registrations" means authorizations, approvals, licenses, permits, certificates, or exemptions issued by any Governmental Authority (including pre-market approval applications, pre market notifications, investigational drug or device exemptions, product recertifications, manufacturing approvals and authorizations, third party certification, pricing and reimbursement approvals, labeling approvals or their foreign equivalent) that are required under the applicable laws for the research, development, manufacture, distribution, marketing, storage, transportation, use and sale of the products of the Borrower and its Subsidiaries.

"Related Parties" means, with respect to any specified Person, such Person's Affiliates and the respective principals, directors, officers, employees, representatives, agents and third party advisors of such Person and such Person's Affiliates.

"Release" means any release, spill, emission, leaking, dumping, injection, pouring, deposit, disposal, discharge, dispersal, leaching or migration into or through the environment or within or upon any building, structure, facility or fixture.

"Relevant Governmental Body" means the Board of Governors of the Federal Reserve System or the NYFRB, or a committee officially endorsed or convened by the Board of Governors of the Federal Reserve System or the NYFRB, or any successor thereto.

"Replacement Term Loans" has the meaning set forth in 9.02(c).

"Required Lenders" means, at any time, Lenders having outstanding Term Loans and unused Term Loan Commitments representing more than 50% of the sum of aggregate outstanding Term Loans and unused Term Loan Commitments at such time.

"Requirement of Law" means, with respect to any Person, (i) the charter, articles or certificate of organization or incorporation and bylaws or other organizational or governing documents of such Person and (ii) any statute, law, treaty, rule, regulation, order, decree, writ, injunction or determination of any arbitrator or court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

"Resolution Authority" means an EEA Resolution Authority or, with respect to any UK Financial Institution, a UK Resolution Authority.

"Restricted Payment" means any dividend or other distribution (whether in cash, securities or other property) with respect to any Equity Interests in the Borrower or any Subsidiary, or any payment thereon (whether in cash, securities or other property), including any sinking fund or similar deposit, on account of the purchase, redemption, retirement, acquisition, cancellation or termination of any Equity Interests in the Borrower or any Subsidiary or any option, warrant or other right to acquire any such Equity Interests in the Borrower or any Subsidiary; provided that the repurchase, redemption or other acquisition or retirement for value of any Equity Interests of a Subsidiary by the Borrower or another Subsidiary shall not constitute a Restricted Payment.

"Revenue" means, with respect to any specified Person for any period, the aggregate of the total revenue of such specified Person and its Subsidiaries for such period, on a consolidated basis.

"S&P" means Standard & Poor's, a division of The McGraw-Hill Companies, Inc.

"SEC" means the Securities and Exchange Commission or any Governmental Authority succeeding to any of its principal functions.

"SEC Extension" means any extension granted by the SEC pursuant to any public pronouncements that apply to the Borrower in connection with the delivery of financial statements; provided that, any automatic extension hereunder as a result of such SEC Extension shall not be for a period of more than 90 days.

"Second Amendment" means that certain Second Amendment to Credit Agreement, dated as of the Second Amendment Effective Date, by and among the Borrower, the other Loan Parties party thereto, Administrative Agent, Lead Arranger, Sole Bookrunner and the Lenders party thereto (including, for the avoidance of doubt, the Second Amendment Effective Date Term Lenders).

"Second Amendment Effective Date" means October 11, 2023.

"Second Amendment Effective Date Term Lender" means, at any time, any Lender that has a Second Amendment Effective Date Term Loan Commitment or an outstanding Second Amendment Effective Date Term Loan.

" Second Amendment Effective Date Term Loan Commitments" means, with respect to each Second Amendment Effective Date Term Lender, such Second Amendment Effective Date Term Lender's Term Loan Commitment to make a Second Amendment Effective Date Term Loan hereunder on the Second Amendment Effective Date as set forth on Schedule 2.01 opposite such Lender's name under the heading "Second Amendment Effective Date Term Loan Commitment", expressed as an amount representing the maximum principal amount of the Second Amendment Effective Date Term Loan to be made by such Lender hereunder, as such commitment may be reduced or increased from time to time pursuant to this Agreement and as amended to reflect assignments. Unless the context shall otherwise require, the term "Second Amendment Effective Date Term Loan Commitments" shall include any commitment to Replacement Term Loans of such Lender. The aggregate amount of the Second Amendment Effective Date Term Loan Commitments as of the Second Amendment Effective Date is $35,000,000.

"Second Amendment Effective Date Term Loans" has the meaning set forth in Section 2.01(c).

"Second Amendment Make Whole/Prepayment Fee Amount" has the meaning set forth in Section 2.12(c)(ii).

"Securities Act" means the Securities Act of 1933 and the rules and regulations of the SEC promulgated thereunder.

"Security Documents" means the Collateral Agreement, the Perfection Certificate, the Mortgages and each other security agreement or other instrument or document executed and delivered pursuant to Section 5.12 or 5.13 to secure any of the Obligations.

"SOFR" means a rate per annum equal to the secured overnight financing rate as administered by the SOFR Administrator.

"SOFR Administrator" means the NYFRB (or a successor administrator of the secured overnight financing rate).

"SOFR Borrowing" means any Borrowing which bears interest at a rate based on Term SOFR, other than pursuant to clause (c) of the definition of "Base Rate".

"SOFR Loan" means any Loan which bears interest at a rate based on Term SOFR, other than pursuant to clause (c) of the definition of "Base Rate".

"Specified Event of Default" means any Event of Default described in Sections 7.01(a), 7.01(b), 7.01(d) (solely with respect to Section 6.12), Section 7.01(e), 7.01(i) or 7.01(j).

"Subordinated Indebtedness" means Indebtedness of the Borrower or any Subsidiary that is contractually subordinated to the Obligations. For the avoidance of doubt, for purposes of this Agreement, the Google Note shall constitute Subordinated Indebtedness.

"subsidiary" means, with respect to any Person (the "parent") at any date, any corporation, limited liability company, partnership, association or other entity the accounts of which would be consolidated with those of the parent in the parent's consolidated financial statements if such financial statements were prepared in accordance with GAAP as of such date.

"Subsidiary" means any subsidiary of the Borrower.

"Subsidiary Loan Party" means any Domestic Subsidiary (other than (a) any Subsidiary that is prohibited by applicable law from guaranteeing the Obligations, (b) any Domestic Subsidiary that is a direct or indirect Subsidiary of a Foreign Subsidiary, (c) any direct or indirect FSHCO, (d) any not-for-profit subsidiary, and (e) any other Subsidiary with respect to which, in the reasonable judgment of the Administrative Agent (confirmed in writing by notice to the Borrower), the cost or other consequences (including any adverse tax consequences) of providing a Guarantee shall be excessive in view of the benefits to be obtained by the Lenders therefrom). The Subsidiary Loan Parties as of the Effective Date are listed on Schedule 3.12.

"Swap Agreement" means (a) any agreement with respect to any swap, forward, future or derivative transaction or option or similar agreement involving, or settled by reference to, one or more rates, currencies, commodities, equity or debt instruments or securities, or economic, financial or pricing indices or measures of economic, financial or pricing risk or value or any similar transaction or any combination of these transactions and (b) any and all agreements and documents (and the related confirmations) entered into in connection with any transactions of any kind, which are subject to the terms and conditions of, or governed by, any form of master agreement published by the International Swaps and Derivatives Association, Inc., any International Foreign Exchange Master Agreement or any other master agreement (any such master agreement, together with any related schedules, a "Master Agreement"), including any such obligations or liabilities under any Master Agreement, provided that no phantom stock or similar plan providing for payments only on account of services provided by current or former directors, officers, employees or consultants of the Borrower or the Subsidiaries shall be a Swap Agreement.

"Swap Obligation" means, with respect to any Guarantor, any obligation to pay or perform under any agreement, contract or transaction that constitutes a "swap" within the meaning of section 1a(47) of the Commodity Exchange Act.

"Taxes" means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

"Term Lender" means, at any time, any Lender that has a Term Loan Commitment or an outstanding Term Loan.

"Term Loan" means (a) the Effective Date Term Loans, (b) the First Amendment Effective Date Term Loans ~~and~~, (c) the Second Amendment Effective Date Term Loans and (d) Refinanced Term Loans and Replacement Term Loans, collectively, or as the context may require.

"Term Loan Commitments" means, collectively, (a) the Effective Date Term Loan Commitments, (b) the First Amendment Effective Date Term Loan Commitments and/or (c) the ~~First~~Second Amendment Effective Date Term Loan Commitments, as the context requires.

"Term Loan Maturity Date" means the fifth anniversary of the Effective Date, or if such date is not a Business Day, the immediately succeeding Business Day; provided that, notwithstanding anything to the contrary in this Agreement, if on the date (or at any time thereafter) that is 135 days prior to the scheduled maturity of the Google Note (such date, the "Test Date"), the Borrower and its Subsidiaries do not have Liquidity in an aggregate amount equal to at least the sum of (x) $100,000,000 plus (y) the

aggregate principal amount of the Google Note required to be repaid on the scheduled maturity date of the Google Note, then the Term Loan Maturity Date shall automatically be accelerated to the Test Date and all of the Loans shall thereupon be due and payable on the Test Date, together with all interest and fees accrued thereon or in respect thereof (including any Make Whole/Prepayment Fee Amount) and any amounts payable pursuant this Agreement.

"Term SOFR" means,

(a) for any calculation with respect to a SOFR Loan, the Term SOFR Reference Rate for a tenor comparable to the applicable Interest Period on the day (such day, the "Periodic Term SOFR Determination Day") that is two (2) Business Days prior to the first day of such Interest Period, as such rate is published by the Term SOFR Administrator; provided, however, that if as of 5:00 p.m. (New York City time) on any Periodic Term SOFR Determination Day the Term SOFR Reference Rate for the applicable tenor has not been published by the Term SOFR Administrator and a Benchmark Replacement Date with respect to the Term SOFR Reference Rate has not occurred, then Term SOFR will be the Term SOFR Reference Rate for such tenor as published by the Term SOFR Administrator on the first preceding Business Day for which such Term SOFR Reference Rate for such tenor was published by the Term SOFR Administrator so long as such first preceding Business Day is not more than three (3) Business Days prior to such Periodic Term SOFR Determination Day; and

(b) for any calculation with respect to a Base Rate Loan on any day, the Term SOFR Reference Rate for a tenor of one month on the day (such day, the "Base Rate Term SOFR Determination Day") that is two (2) Business Days prior to such day, as such rate is published by the Term SOFR Administrator; provided however, that if as of 5:00 p.m. (New York City time) on any Base Rate Term SOFR Determination Day the Term SOFR Reference Rate for the applicable tenor has not been published by the Term SOFR Administrator and a Benchmark Replacement Date with respect to the Term SOFR Reference Rate has not occurred, then Term SOFR will be the Term SOFR Reference Rate for such tenor as published by the Term SOFR Administrator on the first preceding Business Day for which such Term SOFR Reference Rate for such tenor was published by the Term SOFR Administrator as long as such first preceding Business Day is not more than three (3) Business Days prior to such Base Rate Term SOFR Determination Day;

provided, that if Term SOFR as so determined shall ever be less than the Floor, then Term SOFR shall be deemed to be the Floor.

"Term SOFR Administrator" means CME Group Benchmark Administration Limited (CBA) (or a successor administrator of the Term SOFR Reference Rate selected by the Administrative Agent in its reasonable discretion).

"Term SOFR Reference Rate" means the forward-looking term rate based on SOFR.

"Transaction Costs" means the payment of fees, expenses and other costs in connection with the items described in clauses (a) and (b) of the definition of Transactions.

"Transactions" means (a) the execution, delivery and performance by each Loan Party of the Loan Documents to which it is to be a party, (b) the borrowing of the Term Loans and the use of the proceeds thereof on the Effective Date, and (c) payment of the Transaction Costs on the Effective Date.

"Treasury Rate" means a rate equal to the then-current yield to maturity on actively traded U.S. Treasury securities having a constant maturity and having a duration equal to (or the nearest available tenor) the period from the date that payment is received to the date that falls on the Term Loan Maturity Date.

"Type", when used in reference to any Loan or Borrowing, refers to whether the rate of interest on such Loan, or on the Loans comprising such Borrowing, is determined by reference to Term SOFR or the Base Rate.

"UK Financial Institution" means any BRRD Undertaking (as such term is defined under the PRA Rulebook (as amended form time to time) promulgated by the United Kingdom Prudential Regulation Authority) or any person falling within IFPRU 11.6 of the FCA Handbook (as amended from time to time) promulgated by the United Kingdom Financial Conduct Authority, which includes certain credit institutions and investment firms, and certain affiliates of such credit institutions or investment firms.

"UK Resolution Authority" means the Bank of England or any other public administrative authority having responsibility for the resolution of any UK Financial Institution.

"Unadjusted Benchmark Replacement" means the applicable Benchmark Replacement excluding the related Benchmark Replacement Adjustment.

"USA Patriot Act" has the meaning set forth in Section 3.17.

"U.S. Person" means any Person that is a "United States person" as defined in Section 7701(a)(30) of the Code.

"U.S. Tax Compliance Certificate" has the meaning set forth in Section 2.17.

"wholly owned" means with respect to any Person, a subsidiary of such Person all the outstanding Equity Interests of which (other than (x) directors' qualifying shares and (y) shares issued to foreign nationals to the extent required by applicable law) are owned by such Person and/or by one or more wholly owned subsidiaries of such Person.

"Write-Down and Conversion Powers" means, (a) with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule, and (b) with respect to the United Kingdom, any powers of the applicable Resolution Authority under the Bail-In Legislation to cancel, reduce, modify or change the form of a liability of any UK Financial Institution or any contract or instrument under which that liability arises, to convert all or part of that liability into shares, securities or obligations of that person or any other person, to provide that any such contract or instrument is to have effect as if a right had been exercised under it or to suspend any obligation in respect of that liability or any of the powers under that Bail-In Legislation that are related to or ancillary to any of those powers.

SECTION 1.02. Classification of Loans and Borrowings. For purposes of this Agreement, Loans may be classified and referred to by Type (e.g., a "SOFR Loan"). Borrowings also may be classified and referred to by Type (e.g., a "SOFR Borrowing").

SECTION 1.03. Terms Generally. The definitions of terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation". The word "will" shall be construed to have the same meaning and effect as the word "shall". Unless the context requires otherwise (a) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein), (b) any reference herein to any Person shall be construed to include such Person's successors and assigns, (c) the words "herein", "hereof" and "hereunder", and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (d) all references herein to Articles, Sections, Exhibits shall be construed to refer to Articles and Sections of, and Exhibits to, this Agreement, (e) all references herein to Schedules shall be construed to refer to the

Schedules to the Confidential Disclosure Letter and (f) the words "asset" and "property" shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including cash, securities, accounts and contract rights. Any reference to "payment in full", "paid in full", "repaid in full", "prepaid in full", "redeemed in full" or any other term or word of similar effect used in this Agreement or any other Loan Document with respect to the Loans or the Obligations shall mean all Obligations (including any Make Whole/Prepayment Fee Amount but excluding any inchoate indemnity obligations) have been repaid in full in cash and have been fully performed and all Commitments have been permanently terminated.

SECTION 1.04. Accounting Terms; GAAP. All accounting terms not specifically or completely defined herein shall be construed in conformity with, and all financial data (including financial ratios and other financial calculations) required to be submitted pursuant to this Agreement shall be prepared in conformity with, GAAP, applied in a manner consistent with that used in preparing the historical financial statements, except as otherwise specifically prescribed herein. No change in the accounting principles used in the preparation of any financial statement hereafter adopted by the Borrower shall be given effect for purposes of measuring compliance with any provisions of Article VI unless the Borrower, the Administrative Agent and the Required Lenders agree to modify such provisions to reflect such changes in GAAP and, unless such provisions are modified, all financial statements, compliance certificates and similar documents provided hereunder shall be provided together with a reconciliation between the calculations and amounts set forth therein before and after giving effect to such change in GAAP. Notwithstanding any other provision contained herein, all terms of an accounting or financial nature used herein shall be construed, and all computations of amounts and ratios referred to in Article VI shall be made, without giving effect to any election under Accounting Standards Codification 825-10 or 470-20 (or any other Financial Accounting Standard having a similar result or effect) to value any Indebtedness or other liabilities of any Loan Party or any Subsidiary thereof at "fair value." A breach of any Financial Performance Covenant shall be deemed to have occurred as of the last day of any specified measurement period, regardless of when the financial statements reflecting such breach are delivered to the Administrative Agent.

SECTION 1.05. Rates. The Administrative Agent does not warrant or accept responsibility for, and shall not have any liability with respect to (a) the continuation of, administration of, submission of, calculation of or any other matter related to Base Rate, the Term SOFR Reference Rate or Term SOFR, or any component definition thereof or rates referred to in the definition thereof, or any alternative, successor or replacement rate thereto (including any Benchmark Replacement), including whether the composition or characteristics of any such alternative, successor or replacement rate (including any Benchmark Replacement) will be similar to, or produce the same value or economic equivalence of, or have the same volume or liquidity as, Base Rate, the Term SOFR Reference Rate, Term SOFR or any other Benchmark prior to its discontinuance or unavailability, or (b) the effect, implementation or composition of any Conforming Changes. The Administrative Agent and its affiliates or other related entities may engage in transactions that affect the calculation of Base Rate, the Term SOFR Reference Rate, Term SOFR, any alternative, successor or replacement rate (including any Benchmark Replacement) or any relevant adjustments thereto, in each case, in a manner adverse to the Borrower. The Administrative Agent may select information sources or services in its reasonable discretion to ascertain the Base Rate, the Term SOFR Reference Rate, Term SOFR or any other Benchmark, in each case pursuant to the terms of this Agreement, and shall have no liability to the Borrower, any Lender or any other person or entity for damages of any kind, including direct or indirect, special, punitive, incidental or consequential damages, costs, losses or expenses (whether in tort, contract or otherwise and whether at law or in equity), for any error or calculation of any such rate (or component thereof) provided by any such information source or service.

SECTION 1.06. Divisions. Any reference herein to a merger, transfer, consolidation, amalgamation, consolidation, assignment, sale, disposition or transfer, or similar term, shall be deemed to

apply to a division of or by a limited liability company, or an allocation of assets to a series of a limited liability company (or the unwinding of such a division or allocation), as if it were a merger, transfer, consolidation, amalgamation, consolidation, assignment, sale or transfer, or similar term, as applicable, to, of or with a separate Person. Notwithstanding anything to the contrary in this Agreement, any division of a limited liability company shall constitute a separate Person hereunder, and each resulting division of any limited liability company that, prior to such division, is a Subsidiary, a Borrower, a Guarantor, a joint venture or any other like term shall remain a Subsidiary, a Borrower, a Guarantor, a joint venture, or other like term, respectively, after giving effect to such division, and any resulting divisions of such Persons shall remain subject to the same restrictions applicable to the pre-division predecessor of such divisions.

ARTICLE II

The Credits

SECTION 2.01. Commitments.

(a) Subject to the terms and conditions set forth herein, each Effective Date Term Lender agrees to make an Effective Date Term Loan to the Borrower on the Effective Date, in a principal amount not exceeding its Effective Date Term Loan Commitment in the amount set forth opposite such Term Lender's name on Schedule 2.01 under the heading "Effective Date Term Loan Commitment". Amounts borrowed under this Section 2.01(a) are referred to as the "Effective Date Term Loan".

(b) Subject to the terms and conditions set forth herein and the First Amendment, each First Amendment Effective Date Term Lender agrees to make a First Amendment Effective Date Term Loan to the Borrower on the First Amendment Effective Date, in a principal amount not exceeding its First Amendment Effective Date Term Loan Commitment in the amount set forth opposite such First Amendment Effective Date Term Lender's name on Schedule 2.01 under the heading "First Amendment Effective Date Term Loan Commitment". Amounts borrowed under this Section 2.01(b) are referred to as the "First Amendment Effective Date Term Loan". Without limiting the generality of the foregoing, the First Amendment Effective Date Term Loans shall have terms, rights, remedies, privileges and protections identical to those applicable to the Effective Date Term Loans under this Agreement and each of the other Loan Documents.

(c) Subject to the terms and conditions set forth herein and the Second Amendment, each Second Amendment Effective Date Term Lender agrees to make a Second Amendment Effective Date Term Loan to the Borrower on the Second Amendment Effective Date, in a principal amount not exceeding its Second Amendment Effective Date Term Loan Commitment in the amount set forth opposite such Second Amendment Effective Date Term Lender's name on Schedule 2.01 under the heading "Second Amendment Effective Date Term Loan Commitment". Amounts borrowed under this Section 2.01(b) are referred to as the "Second Amendment Effective Date Term Loan". Without limiting the generality of the foregoing, the Second Amendment Effective Date Term Loans shall have, except as otherwise set forth herein, terms, rights, remedies, privileges and protections identical to those applicable to the Effective Date Term Loans and First Amendment Effective Date Term Loans under this Agreement and each of the other Loan Documents.

(~~c~~d) Amounts repaid or prepaid in respect of the Term Loans may not be reborrowed.

SECTION 2.02. Loans and Borrowings.

(a) Each Term Loan shall be made as part of a Borrowing consisting of Term Loans of the same Type made by the Lenders ratably in accordance with their respective Commitments. The

failure of any Lender to make its Term Loan required to be made by it shall not relieve any other Lender of its obligations hereunder, provided that the Commitments of the Lenders are several and no Lender shall be responsible for any other Lender's failure to make Term Loans as required.

(b) Subject to Section 2.14, each Term Loan Borrowing shall be comprised entirely of Base Rate Loans or SOFR Loans as the Borrower may request in accordance herewith.

(c) At the commencement of each Interest Period for any SOFR Borrowing, such Borrowing shall be in an aggregate amount not less than $200,000. At the time that each Base Rate Borrowing is made, such Borrowing shall be in an aggregate amount that is an integral multiple of $50,000 and not less than $250,000. Borrowings of more than one Type may be outstanding at the same time. There shall not at any time be more than a total of eight SOFR Borrowings outstanding.

(d) Notwithstanding any other provision of this Agreement, the Borrower shall not be entitled to request, or to elect to convert or continue, any Borrowing if the Interest Period requested with respect thereto would end after the Term Loan Maturity Date.

SECTION 2.03. Requests for Borrowings. To request a Term Loan Borrowing on the Effective Date ~~or~~, First Amendment Effective Date or Second Amendment Effective Date, as applicable, the Borrower shall notify the Administrative Agent of such request in writing not later than 1:00 p.m., New York City time, two (2) Business Days[a] before the date of the proposed Borrowing. Such written Borrowing Request shall be signed by the Borrower and specify the following information in compliance with Section 2.02:

(i) the aggregate amount of such Borrowing;

(ii) the date of such Borrowing, which shall be a Business Day;

(iii) whether such Borrowing is to be a Base Rate Borrowing or a SOFR Borrowing; and

(iv) the location and number of the Borrower's account to which funds are to be disbursed, which shall comply with the requirements of Section 2.06.

If no election as to the Type of Borrowing is specified, then the requested Borrowing shall be a SOFR Borrowing. Promptly following receipt of a Borrowing Request in accordance with this Section 2.03, the Administrative Agent shall advise each Lender of the details thereof and of the amount of such Lender's Loan to be made as part of the requested Borrowing.

SECTION 2.04. [Reserved].

SECTION 2.05. [Reserved].

SECTION 2.06. Funding of Borrowings.

(a) Each Lender shall make each Loan to be made by it hereunder on the proposed date thereof by wire transfer of immediately available funds by 12:00 noon, New York City time, to the account of the Administrative Agent most recently designated by it for such purpose by notice to the Lenders. Upon receipt of all requested funds, the Administrative Agent will make such Loans available to the Borrower by promptly crediting the amounts so received by wire transfer, in like funds, to an account designated by the Borrower in the applicable Borrowing Request.

[a] ~~NTD: Ares' back office will require 2 BDs advance written notice.~~

(b) Unless the Administrative Agent shall have received notice from a Lender prior to the proposed Borrowing that such Lender will not make available to the Administrative Agent such Lender's share of such Borrowing, the Administrative Agent may assume that such Lender has made such share available on such date in accordance with Section 2.06(a) and may, in reliance upon such assumption and in its sole discretion, make available to the Borrower a corresponding amount. In such event, if a Lender has not in fact made its share of the applicable Borrowing available to the Administrative Agent, then the applicable Lender agrees to pay to the Administrative Agent an amount equal to such share on demand of the Administrative Agent. If such Lender does not pay such corresponding amount forthwith upon demand of the Administrative Agent therefor, the Administrative Agent shall promptly notify the Borrower and the Borrower agrees to pay such corresponding amount to the Administrative Agent forthwith on demand. The Administrative Agent shall also be entitled to recover from such Lender the interest on such corresponding amount for each day from and including the date such amount is made available to the Borrower to but excluding the date of payment to the Administrative Agent, at (i) in the case of such Lender, the greater of the Federal Funds Rate and a rate determined by the Administrative Agent in accordance with banking industry rules on interbank compensation or (ii) in the case of the Borrower, the interest rate applicable to Base Rate Loans. If such Lender pays such amount to the Administrative Agent, then such amount shall constitute such Lender's Loan included in such Borrowing.

SECTION 2.07. Interest Elections.

(a) Each Term Loan Borrowing initially shall be of the Type specified in the applicable Borrowing Request and, in the case of a SOFR Borrowing, shall have an Interest Period of three months. Thereafter, the Borrower may elect to convert such Borrowing to a different Type or to continue such Borrowing. The Borrower may elect different options with respect to different portions of the affected Borrowing, in which case each such portion shall be allocated ratably among the Lenders holding the Loans comprising such Borrowing, and the Loans comprising each such portion shall be considered a separate Borrowing.

(b) To make an election pursuant to this Section 2.07, the Borrower shall notify the Administrative Agent of such election in writing (i) in the case of a SOFR Borrowing, not later than 1:00 p.m., New York City time, three Business Days before the date of the proposed election or (ii) in the case of a Base Rate Borrowing, not later than 12:00 noon, New York City time, one Business Day before the date of the proposed election. Each such written Interest Election Request shall be irrevocable and shall be substantially in the form of a written Interest Election Request signed by the Borrower.

(c) Each written Interest Election Request shall specify the following information in compliance with Section 2.02:

(i) the Borrowing to which such Interest Election Request applies and, if different options are being elected with respect to different portions thereof, the portions thereof to be allocated to each resulting Borrowing (in which case the information to be specified pursuant to clauses (iii) and (iv) below shall be specified for each resulting Borrowing);

(ii) the effective date of the election made pursuant to such Interest Election Request, which shall be a Business Day; and

(iii) whether the resulting Borrowing is to be a Base Rate Borrowing or a SOFR Borrowing.

(d) Promptly following receipt of an Interest Election Request, the Administrative Agent shall advise each Lender of the details thereof and of such Lender's portion of each resulting Borrowing.

(e) If the Borrower fails to deliver a timely Interest Election Request with respect to a SOFR Borrowing prior to the end of the Interest Period applicable thereto, then, unless such Borrowing is repaid as provided herein, at the end of such Interest Period such Borrowing shall automatically be continued as a SOFR Borrowing having an Interest Period of three month's duration.

(f) Notwithstanding any contrary provision hereof, if an Event of Default has occurred and is continuing and the Administrative Agent, at the request of the Required Lenders, so notifies the Borrower, then, so long as an Event of Default is continuing, (i) no outstanding Borrowing may be converted to or continued as a SOFR Borrowing and (ii) unless repaid, each SOFR Borrowing shall be converted to a Base Rate Borrowing at the end of the Interest Period applicable thereto.

SECTION 2.08. Termination of Commitments. Unless previously terminated, (a) the Effective Date Term Loan Commitments shall terminate upon the funding of the Effective Date Term Loans on the Effective Date ~~and~~, (b) the First Amendment Effective Date Term Loan Commitments shall terminate upon the funding of the First Amendment Effective Date Term Loans on the First Amendment Effective Date and (c) the Second Amendment Effective Date Term Loan Commitments shall terminate upon the funding of the Second Amendment Effective Date Term Loans on the Second Amendment Effective Date.

SECTION 2.09. Evidence of Debt.

(a) [Reserved].

(b) Each Lender shall maintain in accordance with its usual practice an account or accounts evidencing the indebtedness of the Borrower to such Lender resulting from each Loan made by such Lender, including the amounts of principal and interest payable and paid to such Lender from time to time hereunder.

(c) The Administrative Agent shall maintain the Register pursuant to Section 9.04(d) in which it shall record (i) the amount of each Loan made hereunder, the Type thereof and the Interest Period applicable thereto, (ii) the amount of any principal or interest due and payable or to become due and payable from the Borrower to each Lender hereunder and (iii) the amount of any sum received by the Administrative Agent hereunder for the account of the Lenders and each Lender's share thereof.

(d) The entries made in the Register and accounts maintained pursuant to Section 2.09(b) and (c) shall be prima facie evidence of the existence and amounts of the obligations recorded therein absent manifest error, provided that the failure of any Lender or the Administrative Agent to maintain such accounts or any error therein shall not in any manner affect the obligation of the Borrower to repay the Loans in accordance with the terms of this Agreement. In the event of any conflict between the records maintained by any Lender and the records maintained by the Administrative Agent in such matters, the records of the Administrative Agent shall control in the absence of manifest error.

(e) Any Lender may request that Loans made by it be evidenced by a promissory note. In such event, Borrower shall execute and deliver to such Lender a promissory note (or, if requested by such Lender, to such Lender and its registered assigns) and in a form approved by the Lender evidencing the Loans, if any, owing to such Lender. Thereafter, the Loans evidenced by such promissory note and interest thereon shall at all times (including after assignment pursuant to Section 9.04) be represented by one or more promissory notes in such form payable to the payee named therein (or, if requested by such payee, to such payee and its registered assigns).

SECTION 2.10. Repayment of Loans; Amortization of Term Loans.

(a) To the extent not previously paid, all Term Loans shall be due and payable on the Term Loan Maturity Date and the Borrower hereby unconditionally promises to pay to the Administrative Agent for the account of each Lender the then unpaid principal amount of the Term Loans of such Lender on the Term Loan Maturity Date (and any other date on which a payment is required to be made pursuant to Section 2.11).

SECTION 2.11. Prepayment of Loans.

(a) The Borrower shall have the right at any time and from time to time to prepay any Term Loans in whole or in part, as selected by the Borrower in its sole discretion and subject to the requirements of clauses (e), (f) and (j) of this Section 2.11.

(b) [Reserved].

(c) In the event and on each occasion that any Net Proceeds are received by or on behalf of the Borrower or any Subsidiary in respect of any Prepayment Event, the Borrower shall, within five (5) Business Days after such Net Proceeds are received by the Borrower or such Subsidiary, prepay Term Loan Borrowings in an aggregate amount equal to 100% of such Net Proceeds; provided, further, that in the case of any event described in clause (a) or (b) of the definition of the term "Prepayment Event" (other than pursuant to a sale and leaseback transaction permitted under Section 6.06), if the Borrower shall deliver to the Administrative Agent a certificate of a Financial Officer to the effect that the Borrower and the Subsidiaries intend to apply the Net Proceeds from such event (or a portion thereof specified in such certificate), within 365 days after receipt of such Net Proceeds in the business of the Borrower and the Subsidiaries, and certifying that no Event of Default has occurred and is continuing, then no prepayment shall be required pursuant to this paragraph in respect of the Net Proceeds specified in such certificate, except to the extent that the aggregate amount of such Net Proceeds that have not been so applied or contractually committed in writing by the end of such 365-day period exceeds $2,500,000 ("Excess Net Proceeds"), promptly after which time a prepayment shall be required in an amount equal to such Excess Net Proceeds that have not been so applied.

(d) In the event and on each occasion that any Net Proceeds from the issuance of Equity Interests for cash or other receipt of cash contributions to its equity in connection with the exercise of the Cure Right are received by or on behalf of the Borrower, the Borrower shall, within one (1) Business Day after such Net Proceeds are received by the Borrower, prepay Term Loan Borrowings in an aggregate amount equal to 100% of such Net Proceeds.

(e) Prior to any optional or mandatory prepayment of Borrowings hereunder, the Borrower shall determine in accordance with Section 2.11(j) the Borrowing or Borrowings to be prepaid and shall specify such determination in the notice of such prepayment pursuant to Section 2.11(f).

(f) The Borrower shall notify the Administrative Agent in writing of any prepayment hereunder (i) in the case of prepayment of a SOFR Borrowing, not later than 12:00 noon, New York City time, three Business Days before the date of prepayment or (ii) in the case of prepayment of a Base Rate Borrowing, not later than 12:00 p.m., New York City time, one Business Days before the date of prepayment. Each such notice shall be irrevocable and shall specify the prepayment date, the principal amount of each Borrowing or portion thereof to be prepaid; provided that, if a notice of prepayment is given

under this Section 2.11, such notice of prepayment may be conditioned upon the effectiveness of other credit facilities or the closing of a refinancing transaction, a sale of all or substantially all of the assets of the Borrower and its Subsidiaries or a Change of Control and such notice of prepayment may be revoked or extended by the Borrower by written notice to the Administrative Agent if such condition is not satisfied on or prior to the specified effective date of prepayment. Promptly following receipt of any such notice, the Administrative Agent shall advise the Lenders of the contents thereof. Each partial prepayment of any Borrowing shall be in an amount that would be permitted in the case of an advance of a Borrowing of the same Type as provided in Section 2.02, except as necessary to apply fully the required amount of a mandatory prepayment. Each prepayment of a Borrowing shall be applied ratably to the Loans included in the prepaid Borrowing. Prepayments shall be accompanied by accrued interest to the extent required by Section 2.13 but shall in no event include premium or penalty.

(g) All Swap Agreements, if any, between Borrower and any of the Lenders or their respective affiliates are independent agreements governed by the written provisions of said Swap Agreements, which will remain in full force and effect, unaffected by any repayment, prepayment, acceleration, reduction, increase or change in the terms of the Loans, except as otherwise expressly provided in said written Swap Agreements, and any payoff statement from the Lenders relating to the Loans shall not apply to said Swap Agreements except as otherwise expressly provided in such payoff statement.

(h) [Reserved].

(i) [Reserved].

(j) Any mandatory or optional prepayments of a Term Loan Borrowing shall be paid to the Term Lenders on a pro rata basis in accordance with their respective holdings of Term Loans.

(k) All prepayments referred to in clause (c) above are subject (i) in the case of any Net Proceeds from Prepayment Events attributable to Foreign Subsidiaries, to there being no material adverse tax consequences to Borrower, or the Subsidiaries, either individually or in the aggregate (which, for the avoidance of doubt, includes, but is not limited to, any prepayment whereby doing so Borrower and the Subsidiaries would incur a material tax liability, including in connection with a tax dividend, deemed dividend pursuant to Section 956 of the Code or a withholding Tax) and (ii) in the case of any Net Proceeds from Prepayment Events attributable to Foreign Subsidiaries, permissibility under local law (e.g., financial assistance, corporate benefit, restrictions on upstreaming of cash intra-group and the fiduciary and statutory duties of the directors of the relevant subsidiaries). The non-application of any prepayment amounts as a consequence of the foregoing provisions will not, for the avoidance of doubt, constitute a Default or an Event of Default, and such amounts shall be available for working capital purposes of the Borrower and the Subsidiaries as long as not required to be prepaid in accordance this Section 2.11(k). Notwithstanding the foregoing, any prepayments required after application of this clause (k) shall be net of any costs, expenses or taxes incurred by the Borrower or any of its Affiliates and arising as a result of compliance with the preceding sentence.

(l) Each Term Lender may reject all or a portion of its pro rata share of any mandatory prepayment (such declined amounts, the "Declined Proceeds") of Term Loans required to be made pursuant to clauses (c) (with respect to Net Proceeds received from a Prepayment Event under clauses (a) or (b) of such definition only) and (d) of this Section 2.11 by providing written notice (each, a "Rejection Notice") to the Administrative Agent and the Borrower no later than 2:00 p.m. one Business Day prior to the date of such prepayment. Each Rejection Notice from a given Lender shall specify the principal amount of the mandatory repayment of Term Loans to be rejected by such Lender. If a Term Lender fails to deliver a Rejection Notice to the Administrative Agent within the time frame specified above or such Rejection Notice fails to specify the principal amount of the Term Loans to be rejected, any such failure will be deemed an acceptance of the total amount of such mandatory prepayment of Term Loans. Any Declined Proceeds may be retained by the Borrower.

SECTION 2.12. Fees.

(a) The Borrower agrees to pay to the Administrative Agent for its own account, the Lead Arranger and the Lenders signatory to the Fee Letter, as applicable, fees payable in the amounts and at the times separately agreed upon between the Borrower, the Administrative Agent, the Lead Arranger and the Lenders signatory to the Fee Letter.

(b) All fees payable hereunder shall be paid on the dates due, in immediately available funds, to the Administrative Agent for distribution, in the case of commitment fees and participation fees, to the Lenders entitled thereto. Fees paid shall not be refundable under any circumstances.

(c) Make-Whole/Prepayment Fee Amount.

(~~c~~i) Effective Date Term Loans and First Amendment Effective Date Term Loans. Notwithstanding anything to the contrary in any of the Loan Documents, the outstanding principal amounts of the Effective Date Term Loans or the First Amendment Effective Date Term Loans and corresponding Obligations shall not be permitted to be prepaid, repaid, redeemed or paid prior to the fourth anniversary of the First Amendment Effective Date except in accordance with this Section 2.12(c)(i). If any Effective Date Term Loans or any First Amendment Effective Date Term Loans are prepaid (other than as a result of an event described in clause (b) of the definition of the term "Prepayment Event"), in addition to the principal amount of the Effective Date Term Loans or First Amendment Effective Date Term Loans and accrued interest, fees and other amounts owed thereon, such Effective Date Term Loans or First Amendment Effective Date Term Loans shall be accompanied by a premium equal to (i) if such prepayment is made prior to the first anniversary of the First Amendment Effective Date for any reason (such as an acceleration of the Effective Date Term Loans or the First Amendment Effective Date Term Loans and other corresponding Obligations following the occurrence of an Event of Default, an exercise of any Credit Party's rights or remedies available under the Loan Documents, upon the consummation of a Change of Control, by any optional prepayment or termination or otherwise), then the amount (in addition to the principal amount of the Effective Date Term Loans or First Amendment Effective Date Term Loans and other corresponding Obligations (other than the Make-Whole Premium applicable to the Effective Date Term Loans and the First Amendment Effective Date Term Loans) and accrued interest, fees and other amounts owed thereon) required to be prepaid, repaid, redeemed or paid shall be the Make-Whole Premium applicable to the principal amount and interest on the Effective Date Term Loans or the First Amendment Effective Date Term Loans or other corresponding Obligations (other than the Make-Whole Premium applicable to the Effective Date Term Loans and the First Amendment Effective Date Term Loans) so prepaid, repaid, redeemed or paid, (ii) if such prepayment is made on or after the first anniversary of the First Amendment Effective Date but prior to the second anniversary of the First Amendment Effective Date for any reason (such as an acceleration of the Effective Date Term Loans or the First Amendment Effective Date Term Loans and other corresponding Obligations following the occurrence of an Event of Default, an exercise of any Credit Party's rights or remedies available under the Loan Documents, upon the consummation of a Change of Control, by any optional prepayment or termination or otherwise), 5.00% of the principal amount of the Effective Date Term Loans or the First Amendment Effective Date Term Loans so prepaid, repaid, redeemed or paid, (iii) if such prepayment is made on or after the second anniversary of the First Amendment Effective Date but prior to the third anniversary of the First Amendment Effective Date for any reason (such as an acceleration of the Effective Date Term Loans or the First Amendment Effective Date Term Loans and other corresponding

Obligations following the occurrence of an Event of Default, an exercise of any Credit Party's rights or remedies available under the Loan Documents, upon the consummation of a Change of Control, by any optional prepayment or termination or otherwise), 2.50% of the principal amount of the Effective Date Term Loans or the First Amendment Effective Date Term Loans so prepaid, repaid, redeemed or paid, (iv) if such prepayment is made on or after the third anniversary of the First Amendment Effective Date but prior to the fourth anniversary of the First Amendment Effective Date for any reason (such as an acceleration of the Effective Date Term Loans or the First Amendment Effective Date Term Loans and other corresponding Obligations following the occurrence of an Event of Default, an exercise of any Credit Party's rights or remedies available under the Loan Documents, upon the consummation of a Change of Control, by any optional prepayment or termination or otherwise), 1.00% of the principal amount of the Effective Date Term Loans or the First Amendment Effective Date Term Loans so prepaid, repaid, redeemed or paid and (v) if such prepayment is made on or after the fourth anniversary of the First Amendment Effective Date, 0.00% of the principal amount of the Effective Date Term Loans or the First Amendment Effective Date Term Loans so prepaid, repaid, redeemed or paid (such Make-Whole Premium applicable to the Effective Date Term Loans and the First Amendment Effective Date Term Loans or other amount required to be paid (or that is otherwise owed) pursuant to the foregoing, the "First Amendment Make Whole/Prepayment Fee Amount"). For purposes of this Section 2.12(c)(i), the principal amount of the Effective Date Term Loans and the First Amendment Effective Date Term Loans shall include all PIK Interest that has been capitalized to principal.

(ii) Second Amendment Effective Date Term Loans. Notwithstanding anything to the contrary in any of the Loan Documents, the outstanding principal amounts of the Second Amendment Effective Date Term Loans and corresponding Obligations shall not be permitted to be prepaid, repaid, redeemed or paid prior to the fourth anniversary of the Second Amendment Effective Date except in accordance with this Section 2.12(c)(ii). If any Second Amendment Effective Date Term Loans are prepaid (other than as a result of an event described in clause (b) of the definition of the term "Prepayment Event"), in addition to the principal amount of the Second Amendment Effective Date Term Loans and accrued interest, fees and other amounts owed thereon, such Second Amendment Effective Date Term Loans shall be accompanied by a premium equal to (i) if such prepayment is made prior to the first anniversary of the Second Amendment Effective Date for any reason (such as an acceleration of the Second Amendment Effective Date Term Loans and other corresponding Obligations following the occurrence of an Event of Default, an exercise of any Credit Party's rights or remedies available under the Loan Documents, upon the consummation of a Change of Control, by any optional prepayment or termination or otherwise), then the amount (in addition to the principal amount of the Loans and other Obligations (other than the Make-Whole Premium applicable to the Second Amendment Effective Date Term Loans) and accrued interest, fees and other amounts owed thereon) required to be prepaid, repaid, redeemed or paid shall be the Make-Whole Premium applicable to the principal amount and interest on the Second Amendment Effective Date Term Loans or other corresponding Obligations (other than the Make-Whole Premium applicable to the Second Amendment Effective Date Term Loans) so prepaid, repaid, redeemed or paid, (ii) if such prepayment is made on or after the first anniversary of the Second Amendment Effective Date but prior to the second anniversary of the Second Amendment Effective Date for any reason (such as an acceleration of the Second Amendment Effective Date Term Loans and other corresponding Obligations following the occurrence of an Event of Default, an exercise of any Credit Party's rights or remedies available under the Loan Documents, upon the consummation of a Change of Control, by any optional prepayment or termination or otherwise), 5.00% of the principal amount of the Second Amendment Effective Date Term Loans so prepaid, repaid, redeemed or paid, (iii) if such prepayment is made on or after the second anniversary of the Second Amendment Effective Date but prior to the third anniversary of the Second Amendment Effective Date for any reason (such as an acceleration of the Second Amendment Effective Date Term Loans and other corresponding Obligations following the occurrence of an Event of Default, an exercise of any Credit Party's rights or remedies available under the Loan Documents, upon the consummation of a Change of Control, by any optional prepayment or termination or otherwise), 2.50% of the principal amount of the Second Amendment Effective Date Term Loans so prepaid, repaid, redeemed or paid, (iv) if such prepayment is made on or after the third anniversary of the Second Amendment Effective Date but prior to the fourth anniversary of the Second Amendment Effective Date for any reason (such as an acceleration of the Second

Amendment Effective Date Term Loans and other corresponding Obligations following the occurrence of an Event of Default, an exercise of any Credit Party's rights or remedies available under the Loan Documents, upon the consummation of a Change of Control, by any optional prepayment or termination or otherwise), 1.00% of the principal amount of the Second Amendment Effective Date Term Loans so prepaid, repaid, redeemed or paid and (v) if such prepayment is made on or after the fourth anniversary of the Second Amendment Effective Date, 0.00% of the principal amount of the Second Amendment Effective Date Term Loans so prepaid, repaid, redeemed or paid (such Make-Whole Premium applicable to the Second Amendment Effective Date Term Loans or other amount required to be paid (or that is otherwise owed) pursuant to the foregoing, the "Second Amendment Make Whole/Prepayment Fee Amount"; the Second Amendment Make Whole/Prepayment Fee Amount and the First Amendment Make Whole/Prepayment Fee Amount, collectively, the "Make Whole/Prepayment Fee Amount"). For purposes of this Section 2.12(c)(ii), the principal amount of the Second Amendment Effective Date Term Loans shall include all PIK Interest that has been capitalized to principal.

(d) The parties hereto acknowledge and agree that, in light of the impracticality and extreme difficulty of ascertaining actual damages, the First Amendment Make Whole/Prepayment Fee Amount ~~is~~and the Second Amendment Make Whole/Prepayment Fee Amount are intended to be a reasonable calculation of the actual damages that would be suffered by the Credit Parties as a result of any such prepayment, repayment, redemption, payment or termination. The parties hereto further acknowledge and agree that the Agents and the Lenders would not have entered into this Agreement, and the Lenders would not have provided the Commitments or Loans hereunder, without the Loan Parties agreeing to pay the First Amendment Make Whole/Prepayment Fee Amount and the Second Amendment Make Whole/Prepayment Fee Amount, as applicable, in the aforementioned instances. The parties hereto further acknowledge and agree that the First Amendment Make Whole/Prepayment Fee Amount ~~is~~and the Second Amendment Make Whole/Prepayment Fee Amount are not intended to act as a penalty or to punish the Borrower or any other Loan Party for any such prepayment, repayment, redemption or payment.

SECTION 2.13. Interest.

(a) The Loans comprising each Base Rate Borrowing shall bear interest at (i) in the event the Borrower makes a PIK Election, the sum of (A) the Base Rate plus the Applicable Rate applicable to a PIK Election paid in cash plus (B) (x) prior to the First Amendment Effective Date, 3.00% per annum and (y) from and after the First Amendment Effective Date, 3.25% per annum, in each case of clauses (B)(x) and (B)(y), paid in-kind by adding such accrued interest to the outstanding principal balance of the applicable Loans on each Interest Payment Date and after giving effect to the foregoing, such accrued and unpaid interest on the Loans shall be deemed to constitute a portion of the outstanding principal balance of the Term Loans for all purposes of this Agreement and the other Loan Documents, including with respect to the accrual of interest thereon at the rates set forth herein (the "PIK Interest") or (ii) in the event the Borrower makes a Cash Election, the Base Rate plus the Applicable Rate applicable to a Cash Election.

(b) The Loans comprising each SOFR Borrowing shall bear interest at (i) in the event the Borrower makes a PIK Election, the sum of (A) Term SOFR for the Interest Period in effect for such Borrowing plus the Applicable Rate applicable to a PIK Election paid in cash plus (B) the PIK Interest or (ii) in the event the Borrower makes a Cash Election, Term SOFR for the Interest Period in effect for such Borrowing plus the Applicable Rate applicable to a Cash Election.

(c) Notwithstanding the foregoing, automatically upon the occurrence of any Event of Default described in Sections 7.01(a), (b), (i) or (j), and at the direction of the Administrative Agent or the Required Lenders in the case of any Event of Default described in Section 7.01(d) (solely with respect to Section 6.12) or Section 7.01(e), all outstanding Obligations shall bear interest, after as well as before judgment, at a rate per annum equal to (1) in the case of any Loan, 2.00% plus the rate otherwise applicable to such Loan as provided in the preceding paragraphs of this Section 2.13 and (2) in the case of any other amount 2.00% plus the rate applicable to Base Rate Loans as provided in Section 2.13(a) (such rates referred to in this clause (c), the "Default Rates").

(d) Accrued interest on each Loan shall be payable in arrears on each Interest Payment Date for such Loan, provided that (i) interest accrued pursuant to Section 2.13(c) shall be payable on demand, (ii) in the event of any repayment or prepayment of any Loan, accrued interest on the principal amount repaid or prepaid shall be payable on the date of such repayment or prepayment and (iii) in the event of any conversion of any SOFR Loan prior to the end of the current Interest Period therefor, accrued interest on such Loan shall be payable on the effective date of such conversion.

(e) All interest hereunder shall be computed on the basis of a year of 360 days, except that interest computed by reference to the Base Rate at times when the Base Rate is based on the Prime Rate shall be computed on the basis of a year of 365 days (or 366 days in a leap year), and in each case shall be payable for the actual number of days elapsed (including the first day but excluding the last day). For the avoidance of doubt, no date of payment shall be included in any computation. The applicable Base Rate or Term SOFR shall be determined by the Administrative Agent, and such determination shall be conclusive absent manifest error.

(f) Notwithstanding anything to the contrary herein, on any Interest Payment Date, the accrued interest on the Term Loans due on such Interest Payment Date may be paid (a) solely in cash at the written election of the Borrower (any such election, a "Cash Election") or (b) partially in cash and partially in kind by increasing the principal amount of the Term Loans by the amount of such interest at the written election of the Borrower (any such election, a "PIK Election"); provided that the Borrower may exercise the PIK Election with respect to any such Interest Payment Date by delivering written notice thereof to the Administrative Agent no later than 1:00 p.m., five Business Days prior to such Interest Payment Date and if the Borrower fails to make any such election, the Borrower shall have deemed to have made the Cash Election for such Interest Payment Date.

(g) Term SOFR for each Interest Period shall be determined by the Administrative Agent, and notice thereof shall be given by the Administrative Agent promptly to the Borrower and each Lender. Each determination of Term SOFR by the Administrative Agent shall be conclusive and binding upon the parties hereto, in the absence of demonstrable error. The Administrative Agent shall, upon written request of the Borrower or any Lender, deliver to the Borrower or such Lender a statement showing the computations used by the Administrative Agent in determining Term SOFR hereunder. In connection with the use or administration of Term SOFR, the Administrative Agent will have the right to make Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Loan Document, any amendments implementing such Conforming Changes will become effective without any further action or consent of any other party to this Agreement or any other Loan Document. The Administrative Agent will promptly notify the Borrower and the Lenders of the effectiveness of any Conforming Changes in connection with the use or administration of Term SOFR.

SECTION 2.14. Benchmark Replacement Setting.

(a) Benchmark Replacement. Notwithstanding anything to the contrary herein or in any other Loan Document, upon the occurrence of a Benchmark Transition Event, the Administrative Agent and the Borrower may amend this Agreement to replace the then-current Benchmark with a Benchmark Replacement. Any such amendment with respect to a Benchmark Transition Event will become effective at 5:00 p.m. (New York City time) on the fifth (5th) Business Day after the Administrative Agent has posted such proposed amendment to all affected Lenders and the Borrower so long as the Administrative Agent has not received, by such time, written notice of objection to such amendment from Lenders comprising the Required Lenders. No replacement of a Benchmark with a Benchmark Replacement pursuant to this Section 2.14(a) will occur prior to the applicable Benchmark Transition Start Date.

(b) Benchmark Replacement Conforming Changes. In connection with the use, administration, adoption or implementation of a Benchmark Replacement, the Administrative Agent, in consultation with the Borrower, will have the right to make Conforming Changes from time to time and, notwithstanding anything to the contrary herein or in any other Loan Document, any amendments implementing such Conforming Changes will become effective without any further action or consent of any other party to this Agreement or any other Loan Document.

(c) Notices; Standards for Decisions and Determinations. The Administrative Agent will promptly notify the Borrower and the Lenders of (i) the implementation of any Benchmark Replacement and (ii) the effectiveness of any Conforming Changes in connection with the use, administration, adoption or implementation of a Benchmark Replacement. The Administrative Agent will promptly notify the Borrower of (x) the removal or reinstatement of any tenor of a Benchmark pursuant to Section 2.14(d) and (y) the commencement of any Benchmark Unavailability Period. Any determination, decision or election that may be made by the Administrative Agent or, if applicable, any Lender (or group of Lenders) pursuant to this Section 2.14, including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error and may be made in its or their sole discretion and without consent from any other party to this Agreement or any other Loan Document, except, in each case, as expressly required pursuant to this Section 2.14.

(d) Unavailability of Tenor of Benchmark. Notwithstanding anything to the contrary herein or in any other Loan Document, at any time (including in connection with the implementation of a Benchmark Replacement), (i) if the then-current Benchmark is a term rate (including the Term SOFR Reference Rate) and either (A) any tenor for such Benchmark is not displayed on a screen or other information service that publishes such rate from time to time as selected by the Administrative Agent in its reasonable discretion in consultation with the Borrower or (B) the regulatory supervisor for the administrator of such Benchmark has provided a public statement or publication of information announcing that any tenor for such Benchmark is not or will not be representative, then the Administrative Agent may modify the definition of "Interest Period" (or any similar or analogous definition) for any Benchmark settings at or after such time to remove such unavailable or non-representative tenor and (ii) if a tenor that was removed pursuant to clause (i) above either (A) is subsequently displayed on a screen or information service for a Benchmark (including a Benchmark Replacement) or (B) is not, or is no longer, subject to an announcement that it is not or will not be representative for a Benchmark (including a Benchmark Replacement), then the Administrative Agent may modify the definition of "Interest Period" (or any similar or analogous definition) for all Benchmark settings at or after such time to reinstate such previously removed tenor.

(e) Benchmark Unavailability Period. Upon the Borrower's receipt of notice of the commencement of a Benchmark Unavailability Period, the Borrower may revoke any pending request for a SOFR borrowing of, conversion to or continuation of SOFR Loans to be made, converted or continued during any Benchmark Unavailability Period and, failing that, the Borrower will be deemed to have

converted any such request into a request for a Borrowing of or conversion to Base Rate Loans. During a Benchmark Unavailability Period or at any time that a tenor for the then-current Benchmark is not an Available Tenor, the component of the Base Rate based upon the then-current Benchmark or such tenor for such Benchmark, as applicable, will not be used in any determination of the Base Rate.

SECTION 2.15. Increased Costs.

(a) If any Change in Law shall:

(i) impose, modify or deem applicable any reserve, special deposit or similar requirement against assets of, deposits with or for the account of, or credit extended by, any Lender (except any such reserve requirement reflected in Term SOFR); or

(ii) impose on any Lender any Taxes (except for Indemnified Taxes, Other Taxes, and Excluded Taxes) on its loans, loan principal, letters of credit, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto; or

(iii) impose on any Lender any other condition affecting this Agreement or SOFR Loans made by such Lender or participation therein;

and the result of any of the foregoing shall be to increase the cost to such Lender or such other Recipient of making or maintaining any SOFR Loan (or of maintaining its obligation to make any such Loan) or to increase the cost to such Lender, or to reduce the amount of any sum received or receivable by such Lender or other Recipient hereunder (whether of principal, interest or otherwise), then the Borrower will pay to such Lender or other Recipient, as applicable, such additional amount or amounts as will compensate such Lender or other Recipient, as applicable, for such additional costs incurred or reduction suffered; provided that such Person shall only be entitled to seek such additional amounts if such Person is generally seeking the payment of similar additional amounts from similarly situated borrowers in comparable credit facilities to the extent it is entitled to do so.

(b) If any Lender determines that any Change in Law affecting such Lender or any lending office of such Lender or such Lender's holding company, if any, regarding capital or liquidity requirements has or would have the effect of reducing the rate of return on such Lender's or on the capital of such Lender's holding company, if any, as a consequence of this Agreement or the Loans made by such Lender to a level below that which such Lender or such Lender's holding company could have achieved but for such Change in Law (taking into consideration such Lender's policies and the policies of such Lender's holding company with respect to capital adequacy or liquidity), then from time to time the Borrower will pay to such Lender such additional amount or amounts as will compensate such Lender or such Lender's holding company for any such reduction suffered; provided that such Person shall only be entitled to seek such additional amounts if such Person is generally seeking the payment of similar additional amounts from similarly situated borrowers in comparable credit facilities to the extent it is entitled to do so.

(c) Notwithstanding anything herein to the contrary, (i) all requests, rules, guidelines, requirements and directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or by United States or foreign regulatory authorities, in each case pursuant to Basel III, and (ii) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, guidelines, requirements and directives thereunder or issued in connection therewith or in implementation thereof, shall in each case be deemed to be a change in law, regardless of the date enacted, adopted, issued or implemented.

(d) A certificate of a Lender setting forth in reasonable detail the basis for and computation of the amount or amounts necessary to compensate such Lender or its holding company, as applicable, as specified in Section 2.15(a) or (b) shall be delivered to the Borrower and shall be conclusive absent manifest error. The Borrower shall pay such Lender the amount shown as due on any such certificate within 10 days after receipt thereof.

(e) Failure or delay on the part of any Lender to demand compensation pursuant to this Section 2.15 shall not constitute a waiver of such Lender's right to demand such compensation, provided that the Borrower shall not be required to compensate a Lender pursuant to this Section 2.15 for any increased costs or reductions incurred more than 270 days prior to the date that such Lender notifies the Borrower of the Change in Law giving rise to such increased costs or reductions and of such Lender's intention to claim compensation therefor, provided, further, that, if the Change in Law giving rise to such increased costs or reductions is retroactive, then the 270-day period referred to above shall be extended to include the period of retroactive effect thereof.

SECTION 2.16. Break Funding Payments. In the event of (a) the payment of any principal of any SOFR Loan other than on the last day of an Interest Period applicable thereto (including as a result of an Event of Default), (b) the conversion of any SOFR Loan other than on the last day of the Interest Period applicable thereto, (c) the failure to borrow, convert, continue or prepay any Term Loan on the date specified in any notice delivered pursuant hereto (regardless of whether such notice may be revoked under Section 2.11(f) and is revoked in accordance therewith), or (d) the assignment of any SOFR Loan other than on the last day of the Interest Period applicable thereto as a result of a request by the Borrower pursuant to Section 2.19, then, in any such event, the Borrower shall compensate each Lender for the loss, cost and expense attributable to such event (but not lost profits). In the case of a SOFR Loan, such loss, cost or expense to any Lender shall be deemed to include an amount determined by such Lender to be the excess, if any, of (i) the amount of interest that would have accrued on the principal amount of such Loan had such event not occurred, at Term SOFR that would have been applicable to such Loan, for the period from the date of such event to the last day of the then current Interest Period therefor (or, in the case of a failure to borrow, convert or continue, for the period that would have been the Interest Period for such Loan), over (ii) the amount of interest that would accrue on such principal amount for such period at the interest rate that such Lender would bid were it to bid, at the commencement of such period, for dollar deposits of a comparable amount and period from other banks in the SOFR market. A certificate of any Lender setting forth any amount or amounts that such Lender is entitled to receive pursuant to this Section 2.16 shall be delivered to the Borrower and shall be conclusive absent manifest error. The Borrower shall pay such Lender the amount shown as due on any such certificate within 10 days after receipt thereof. Notwithstanding the foregoing, no additional amounts shall be due and payable pursuant to this Section 2.16 to the extent that on the relevant due date the Borrower deposits in a Prepayment Account an amount equal to any payment of SOFR Loans otherwise required to be made on a date that is not the last day of the applicable Interest Period; provided that on the last day of the applicable Interest Period, the Administrative Agent shall be authorized, without any further action by or notice to or from the Borrower or any other Loan Party, to apply such amount to the prepayment of such SOFR Loans. For purposes of this Agreement, the term "Prepayment Account" shall mean a non-interest bearing account established by the Borrower with the Administrative Agent and over which the Administrative Agent shall have exclusive dominion and control, including the right of withdrawal for application in accordance with this Section 2.16.

SECTION 2.17. Taxes.

(a) Any and all payments by or on account of any obligation of any Loan Party hereunder or under any other Loan Document shall be made free and clear of and without deduction or withholding for any Taxes, except as required by applicable law. If any applicable law (as determined in the good faith discretion of an applicable withholding agent) requires the deduction or withholding of any

Tax from any such payment by a withholding agent, then the applicable withholding agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted or withheld to the relevant Governmental Authority in accordance with applicable law and, if such Tax is an Indemnified Tax or Other Tax, then the sum payable by the Borrower shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section 2.17) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding been made.

(b) Without duplication of other amounts paid by any Loan Party under this Section 2.17, the applicable Loan Party shall pay any Other Taxes to the relevant Governmental Authority in accordance with applicable law.

(c) The applicable Loan Party shall indemnify the Administrative Agent and each Lender within 30 days after written demand therefor, for the full amount of any Indemnified Taxes or Other Taxes paid by the Administrative Agent or such Lender, as applicable, on or with respect to any payment by or on account of any obligation of such Loan Party hereunder or under any other Loan Document (including Indemnified Taxes or Other Taxes imposed or asserted on or attributable to amounts payable under this Section 2.17), whether or not such Indemnified Taxes or Other Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to the Borrower by a Lender (with a copy to the Administrative Agent), or by the Administrative Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error.

(d) Each Lender shall severally indemnify the Administrative Agent, within ten (10) days after demand therefor, for (i) any Indemnified Taxes or Other Taxes attributable to such Lender (but only to the extent that the Loan Parties have not already indemnified the Administrative Agent for such Indemnified Taxes or Other Taxes and without limiting or expanding the obligation of the Loan Parties to do so), (ii) any Taxes attributable to such Lender's failure to comply with the provisions of Section 9.04(e) relating to the maintenance of a Participant Register and (iii) any Excluded Taxes attributable to such Lender, in each case, that are payable or paid by the Administrative Agent in connection with any Loan Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to any Lender by the Administrative Agent shall be conclusive absent manifest error. Each Lender hereby authorizes the Administrative Agent to set off and apply any and all amounts at any time owing to such Lender under any Loan Document or otherwise payable by the Administrative Agent to the Lender from any other source against any amount due to the Administrative Agent under this paragraph (d).

(e) As soon as practicable after any payment of Indemnified Taxes or Other Taxes by any Loan Party to a Governmental Authority, such Loan Party shall deliver to the Administrative Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, if any, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to the Administrative Agent.

(f) Status of Lenders.

(i) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to the Borrower and the Administrative Agent, at the time or times reasonably requested by the Borrower or the Administrative Agent, such properly completed and executed documentation reasonably requested by the Borrower or the Administrative Agent as will permit such payments to be made without

withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by the Borrower or the Administrative Agent, shall deliver such other documentation prescribed by applicable law or reasonably requested by the Borrower or the Administrative Agent as will enable the Borrower or the Administrative Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in this Section 2.17(f)(ii)(1), (ii)(2) and (ii)(4) below) shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender.

(ii) Without limiting the generality of the foregoing,

(1) any Lender that is a U.S. Person shall deliver to the Borrower and the Administrative Agent on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent), executed copies of IRS Form W-9 certifying that such Lender is not subject to U.S. federal backup withholding tax;

(2) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Borrower and the Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent), whichever of the following is applicable:

(A) in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed copies of IRS Form W-8BEN or W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN or W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;

(B) executed copies of IRS Form W-8ECI;

(C) in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Code, (x) a certificate substantially in the form of Exhibit I-1 to the effect that such Foreign Lender is not a "bank" within the meaning of Section 881(c)(3)(A) of the Code, a "10 percent shareholder" of the Borrower within the meaning of Section 881(c)(3)(B) of the Code, or a "controlled foreign corporation" related to the Borrower as described in Section 881(c)(3)(C) of the Code (a "U.S. Tax Compliance Certificate") and (y) executed copies of IRS Form W-8BEN or W-8BEN-E; or

(D) to the extent a Foreign Lender is not the beneficial owner, executed copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN or W-8BEN-E, a U.S. Tax Compliance Certificate substantially in the form of Exhibit I-2 or Exhibit I-3, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Exhibit I-4 on behalf of each such direct and indirect partner;

(3) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Borrower and the Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent), executed copies of any other form prescribed by applicable law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by applicable law to permit the Borrower or the Administrative Agent to determine the withholding or deduction required to be made; and

(4) if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Lender shall deliver to the Borrower and the Administrative Agent at the time or times prescribed by law and at such time or times reasonably requested by the Borrower or the Administrative Agent such documentation prescribed by applicable law (including as prescribed by Section 1471(b)(3)(C)(i) of the Code) and such additional documentation reasonably requested by the Borrower or the Administrative Agent as may be necessary for the Borrower and the Administrative Agent to comply with their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount to deduct and withhold from such payment. Solely for purposes of this clause (4), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

Each Lender agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification, provide such successor form, or promptly notify the Borrower and the Administrative Agent in writing of its legal inability to do so.

(g) On or before the date the Administrative Agent becomes a party to this Agreement, the Administrative Agent shall provide to the Borrower, two duly-signed, properly completed copies of the documentation prescribed in clause (i) or (ii) below, as applicable (together with all required attachments thereto): (i) IRS Form W-9 or any successor thereto, or (ii) (A) IRS Form W-8ECI or any successor thereto, and (B) with respect to payments received on account of any Lender, a U.S. branch withholding certificate on IRS Form W-8IMY or any successor thereto evidencing its agreement with the Borrower to be treated as a U.S. Person for U.S. federal withholding purposes. At any time thereafter, the Administrative Agent shall provide updated documentation previously provided (or a successor form thereto) when any documentation previously delivered has expired or become obsolete or invalid or otherwise upon the reasonable request of the Borrower.

(h) If any party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified (including by payment of additional amounts) pursuant to this Section 2.17, it shall pay over such refund to the indemnifying party (but only to the extent of indemnity payments made, or additional amounts paid, by the indemnifying party under this Section 2.17 with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses of such indemnified party and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund), provided that the indemnifying party, upon the request of the indemnified party, agrees to repay the amount paid over to the indemnifying party pursuant to this paragraph (h) (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) to the indemnified

party in the event the indemnified party is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this paragraph (h), in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this paragraph (h) the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This Section paragraph (h) shall not be construed to require any indemnified party to make available its tax returns (or any other information relating to its taxes that it deems confidential) to the indemnifying party or any other Person.

(i) Failure or delay on the part of any Lender or the Administrative Agent to demand compensation pursuant to the foregoing provisions of this Section 2.17 shall not constitute a waiver of such Lender's or Administrative Agent's right to demand such compensation, provided that the Borrower shall not be required to compensate a Lender or the Administrative Agent pursuant to the foregoing provisions of Section 2.17 for any Taxes or related costs suffered more than 270 days prior to the date that such Lender or the Administrative Agent notifies the Borrower of the event giving rise to such claim and of such Lender's or the Administrative Agent's intention to claim compensation therefor (except that, if the circumstance giving rise to such demand for compensation is retroactive, then the 270-day period referred to above shall be extended to include the period of retroactive effect thereof).

(j) Each party's obligations under this Section 2.17 shall survive the resignation or replacement of the Administrative Agent or any assignment of rights by, or the replacement of, a Lender, the termination of the Commitments and the repayment, satisfaction or discharge of all obligations under any Loan Document.

(k) Borrower and each Lender acknowledge and agree that, for U.S. federal and other applicable income tax purposes, the Term Loans have original issue discount ("OID") within the meaning of Section 1272 of the Code, and shall not be treated as "contingent payment debt instruments" as defined pursuant to Treasury Regulation Section 1.1275-4. Information regarding the amount of any OID, the issue price, the issue date and the yield to maturity of the Term Loans may be obtained by writing to the Borrower at the address specified in Section 9.01. Neither Borrower nor any Lender shall take any tax position inconsistent with this Section 2.17(k) unless otherwise required by the final determination of a tax authority following a tax audit or examination.

SECTION 2.18. Payments Generally; Pro Rata Treatment; Sharing of Setoffs.

(a) The Borrower shall make each payment required to be made by it hereunder or under any other Loan Document (whether of principal, interest or fees (including any Make Whole/Prepayment Fee Amount), or of amounts payable under Section 2.15, 2.16 or 2.17, or otherwise) at or prior to the time expressly required hereunder or under such other Loan Document for such payment (or, if no such time is expressly required, prior to 2:00 p.m., New York City time), on the date when due, in immediately available funds, without setoff or counterclaim. Any amounts received after such time on any date may, in the discretion of the Administrative Agent, be deemed to have been received on the next succeeding Business Day for purposes of calculating interest thereon. All such payments shall be made to the Administrative Agent at its offices at the account as most recently designated in writing for the receipt of such payments, except that payments pursuant to Sections 2.15, 2.16, 2.17 and 9.03 shall be made directly to the Persons entitled thereto and payments pursuant to other Loan Documents shall be made to the Persons specified therein. The Administrative Agent shall distribute any such payments received by it for the account of any other Person to the appropriate recipient promptly following receipt thereof. If any payment under any Loan Document shall be due on a day that is not a Business Day, the date for payment shall be extended to the next succeeding Business Day, and, in the case of any payment accruing interest, interest thereon shall be payable for the period of such extension. All payments under each Loan Document shall be made in dollars.

(b) If at any time insufficient funds are received by and available to the Administrative Agent to pay fully all amounts of principal, interest and fees then due hereunder, such funds shall be applied (i) first, towards payment of interest and fees then due hereunder, ratably among the parties entitled thereto in accordance with the amounts of interest and fees then due to such parties, and (ii) second, towards payment of principal then due hereunder, ratably among the parties entitled thereto in accordance with the amounts of principal then due to such parties.

(c) [Reserved].

(d) Unless the Administrative Agent shall have received notice from the Borrower prior to the date on which any payment is due to the Administrative Agent for the account of the Lenders hereunder that the Borrower will not make such payment, the Administrative Agent may assume that the Borrower has made such payment on such date in accordance herewith and may, in reliance upon such assumption and in its sole discretion, distribute to the Lenders the amount due. In such event, if the Borrower has not in fact made such payment, then each of the Lenders severally agrees to repay to the Administrative Agent forthwith on demand the amount so distributed to such Lender with interest thereon, for each day from and including the date such amount is distributed to it to but excluding the date of payment to the Administrative Agent, at the greater of the Federal Funds Rate and a rate determined by the Administrative Agent in accordance with banking industry rules on interbank compensation.

(e) If any Lender shall fail to make any payment required to be made by it pursuant to Section 2.06, 2.18(d) or 9.03(c), then the Administrative Agent may, in its discretion (notwithstanding any contrary provision hereof), apply any amounts thereafter received by the Administrative Agent for the account of such Lender to satisfy such Lender's obligations under such Sections until all such unsatisfied obligations are fully paid.

(f) Notwithstanding any contrary provision set forth herein or in any other Loan Document, (i) during the continuance of an Event of Default, the Administrative Agent may, and shall upon the direction of Required Lenders apply any and all payments received by the Administrative Agent in respect of any Obligation in accordance with clauses first through sixth below; and (ii) all payments made by Loan Parties to the Administrative Agent after any or all of the Obligations under the Loan Documents have been accelerated (so long as such acceleration has not been rescinded) or have otherwise matured, including proceeds of Collateral, shall be applied as follows:

(i) first, to payment of costs, expenses and indemnities of the Administrative Agent payable or reimbursable by the Loan Parties under the Loan Documents;

(ii) second, to payment of costs, expenses and indemnities of Lenders payable or reimbursable by the Loan Parties under this Agreement;

(iii) third, to payment of all accrued unpaid interest on the Obligations and fees owed to the Administrative Agent and the Lenders (whether or not accruing after the filing of any case under the Bankruptcy Code with respect to any Obligations and whether or not a claim for such post-filing or post-petition interest, fees, and charges is allowed or allowable in any such proceeding);

(iv) fourth, to payment of principal of the Obligations (including any Make Whole/Prepayment Fee Amount) then due and payable to the extent not then due and payable;

(v) fifth, to payment of any other amounts owing constituting Obligations; and

(vi) sixth, any remainder shall be for the account of and paid to whoever may be lawfully entitled thereto.

In carrying out the foregoing, (i) amounts received shall be applied to each category in the numerical order provided until exhausted prior to the application to the immediately succeeding category, (ii) each of the Lenders or other Persons entitled to payment shall receive an amount equal to its pro rata share of amounts available to be applied pursuant to clauses third, fourth and fifth above and (iii) no payments by a Guarantor and no proceeds of Collateral of a Guarantor shall be applied to Obligations, the guaranty of which by such Guarantor would constitute an Excluded Swap Obligation. Notwithstanding the foregoing, obligations in respect of Swap Agreements with parties that are not Affiliates of the Administrative Agent shall be excluded from the application described above unless at least three Business Days prior to any distribution, the Administrative Agent has received written notice from the applicable Credit Party (or its Affiliate) of the amount of Obligations in respect of Swap Agreements or then due and payable, together with such supporting documentation as Agent may request.

SECTION 2.19. Mitigation Obligations; Replacement of Lenders.

(a) If any Lender requests compensation under Section 2.15, or if the Borrower is required to pay any additional amount to any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.17, then such Lender shall use reasonable efforts to designate a different lending office for funding or booking its Loans hereunder or to assign its rights and obligations hereunder to another of its offices, branches or affiliates, if, in the judgment of such Lender, such designation or assignment (i) would eliminate or reduce amounts payable pursuant to Section 2.15 or 2.17, as applicable, in the future and (ii) would not subject such Lender to any unreimbursed cost or expense and would not otherwise be disadvantageous to such Lender. The Borrower hereby agrees to pay all reasonable costs and expenses incurred by any Lender in connection with any such designation or assignment.

(b) If (i) any Lender requests compensation under Section 2.15, or if the Borrower is required to pay any additional amount to any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.17, or (ii) any Lender becomes a Defaulting Lender, then the Borrower may, at its sole expense and effort, upon notice to such Lender and the Administrative Agent, require such Lender to assign and delegate, without recourse (in accordance with and subject to the restrictions contained in Section 9.04), all its interests, rights and obligations under this Agreement to an assignee that shall assume such obligations (which assignee may be another Lender, if a Lender accepts such assignment), provided that (i) the Borrower shall have received the prior written consent of the Administrative Agent, which consent shall not unreasonably be withheld, (ii) such Lender shall have received payment of an amount equal to the outstanding principal of its Loans, accrued interest thereon, accrued fees and all other amounts payable to it hereunder, from the assignee (to the extent of such outstanding principal and accrued interest and fees) or the Borrower (in the case of all other amounts) and (iii) in the case of any such assignment resulting from a claim for compensation under Section 2.15 or payments required to be made pursuant to Section 2.17, such assignment will result in a material reduction in such compensation or payments. A Lender shall not be required to make any such assignment and delegation if, prior thereto, as a result of a waiver by such Lender or otherwise, the circumstances entitling the Borrower to require such assignment and delegation cease to apply.

ARTICLE III

Representations and Warranties

The Borrower represents and warrants to the Lenders that:

SECTION 3.01. Organization; Power. Each of the Borrower and the Subsidiaries (a) is duly organized or formed, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, (b) has the power and authority and all governmental rights, qualifications, approvals, authorizations, permits, accreditations, licenses and franchises material to the business of the Borrower and the Subsidiaries taken as a whole that are necessary to own its assets, to carry on its business as now conducted and as proposed to be conducted and, in the case of the Loan Parties, to execute, deliver and perform its obligations under each Loan Document to which it is a party and (c) except where the failure to do so, individually or in the aggregate, is not reasonably likely to result in a Material Adverse Effect, is qualified to do business in, and is in good standing in, every jurisdiction where such qualification is required.

SECTION 3.02. Authorization; Enforceability. The Transactions to be entered into by each Loan Party have been duly authorized by all necessary corporate or other action and, if required, stockholder action. This Agreement has been duly executed and delivered by the Borrower and constitutes, and each other Loan Document to which any Loan Party is to be a party, when executed and delivered by such Loan Party, will constitute, a legal, valid and binding obligation of the Borrower or such Loan Party, as applicable, enforceable in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other laws affecting creditors' rights generally and subject to general principles of equity, regardless of whether considered in a proceeding in equity or at law.

SECTION 3.03. Governmental Approvals; No Conflicts. Except as set forth in Schedule 3.03 the Transactions (a) do not require any consent or approval of, registration or filing with, or any other action by, any Governmental Authority, except such as have been obtained or made and are in full force and effect and except those that are required or permitted to be obtained following consummation of the Transactions, the absence of which individually or in the aggregate are not reasonably likely to result in a Material Adverse Effect and filings necessary to perfect Liens created under the Loan Documents, (b) will not violate any Requirement of Law applicable to the Borrower or any of the Subsidiaries, as applicable, (c) will not violate or result in a default under any indenture or other material agreement or instrument binding upon the Borrower or any of the Subsidiaries or any of their assets, or give rise to a right thereunder to require any payment to be made by the Borrower or any of the Subsidiaries or give rise to a right of, or result in, termination, cancellation or acceleration of any material obligation thereunder, (d) will not result in the creation or imposition of any Lien on any asset of the Borrower or any of the Subsidiaries, except Liens created under the Loan Documents and (e) will not violate any judgment, order, decree or injunction that is binding upon any Loan Party or any of their respective properties.

SECTION 3.04. Financial Condition; No Material Adverse Change; Projections; No Default.

(a) The Borrower has heretofore furnished to the Lenders the Annual Financial Statements. Such Annual Financial Statements present fairly, in all material respects, the financial position and results of operations and cash flows of the Borrower and the Subsidiaries as of such dates and for such periods in accordance with GAAP consistently applied.

(b) The Borrower has heretofore furnished to the Lenders the Pro Forma Financial Statements. Such Pro Forma Financial Statements have been prepared in good faith by the Borrower.

(c) Except for (i) liabilities reflected in or reserved against in the financial statements referred to above or the notes thereto, (ii) liabilities incurred in the ordinary course of business and (iii) liabilities incurred in connection with the Transactions, after giving effect to the Transactions, none of the Borrower or the Subsidiaries has, as of the Effective Date, any liabilities that are, individually or in the aggregate, reasonably likely to result in a Material Adverse Effect.

(d) No event, change, condition or state of facts has occurred that has resulted in, or is reasonably likely to result in, individually or in the aggregate, a Material Adverse Effect since June 30, 2022.

(e) The Projections have been prepared in good faith based upon assumptions believed by the Borrower to be reasonable at the time furnished, it being recognized by the Agents and the Lenders that such Projections as to future events are not to be viewed as facts and that actual results during the period or periods covered by any such Projections may differ from the projected results and such differences may be material.

(f) No Default or Event of Default exists or would immediately result from the incurrence by any Loan Party of any Indebtedness hereunder or under any other Loan Document.

(g) As of the Effective Date, the Borrower and its Subsidiaries have no Indebtedness other than the Google Note and Indebtedness set forth in Schedule 6.01(iii).

(h) As of the Effective Date, other than the Loan Documents, the Borrower and its Subsidiaries are not party to any agreement or other arrangement that prohibits, restricts or imposes any condition upon (i) the ability of the Borrower or any Subsidiary to create, incur or permit to exist any Lien upon any of its property or assets or (ii) the ability of any Subsidiary to make Investments or to pay dividends or other distributions with respect to any shares of its capital stock or to make or repay loans or advances to the Borrower or any Subsidiary or to Guarantee Indebtedness of the Borrower or any other Subsidiary. The foregoing sentence shall not apply to restrictions and conditions (A) imposed by law or by any Loan Document, (B) existing on the Effective Date and identified on Schedule 6.10 (but shall apply to any extension or renewal of, or any amendment or modification expanding the scope of, any such restriction or condition unless such amendment is not otherwise prohibited by Section 6.11), (C) contained in agreements relating to the sale of a Subsidiary pending such sale, provided such restrictions and conditions apply only to the Subsidiary that is to be sold and such sale is permitted hereunder, (D) imposed by any customary provisions restricting assignment of any agreement entered into the ordinary course of business, (E) imposed by any instrument or agreement governing Indebtedness of a Subsidiary acquired by the Borrower or any of the Subsidiaries as in effect at the time of such acquisition (except to the extent such Indebtedness was incurred in connection with or in contemplation of such acquisition), which encumbrance or restriction is not applicable to any Person, or the properties or assets of any such Person, other than the Person or any of its Subsidiaries, so acquired (provided that such Indebtedness was permitted by Section 6.01 to be incurred), (F) imposed by any instrument or agreement governing Indebtedness of the Borrower or any Subsidiary that is incurred or issued subsequent to the Effective Date and is permitted pursuant to Section 6.01 (provided that the restrictions in such Indebtedness are not materially more restrictive in the aggregate than the restrictions contained in this Agreement) and (G) solely with respect to clause (i), customary provisions in leases restricting the assignment thereof.

SECTION 3.05. Properties.

(a) Each of the Borrower and the Subsidiaries has good title to, or valid leasehold interests in, all its real and personal property material to its business, free and clear of all Liens, except for Liens expressly permitted pursuant to Section 6.02.

(b) Each of the Borrower and the Subsidiaries owns, licenses or possesses the right to use all trademarks, trade names, copyrights, patents and other intellectual property material to its business, and the use thereof by the Borrower and the Subsidiaries does not, to the knowledge of the Borrower, infringe upon the rights of any other Person.

(c) Schedule 3.05 sets forth the address of each real property owned, leased or otherwise held by any of the Loan Parties as of the Effective Date after giving effect to the Transactions.

(d) No Mortgage encumbers improved real property that is located in an area that has been identified by the Secretary of Housing and Urban Development as an area having special flood hazards within the meaning of the National Flood Insurance Act of 1968 unless flood insurance available under such Act has been obtained in accordance with Section 5.07 unless waived by the Administrative Agent in its sole discretion.

SECTION 3.06. Litigation. Except as set forth on Schedule 3.06, there are no actions, suits or proceedings by or before any arbitrator or Governmental Authority pending against or, to the knowledge of the Borrower, threatened in writing against or affecting the Borrower or any Subsidiary that would reasonably be likely to, individually or in the aggregate, (i) result in a Material Adverse Effect or (ii) adversely affect in any material respect the ability of the Loan Parties to consummate the Transactions or the other transactions contemplated hereby.

SECTION 3.07. Compliance with Laws and Agreements. Except as set forth in Schedule 3.07, and as is not reasonably likely to result in, individually or in the aggregate, a Material Adverse Effect, each of the Borrower and the Subsidiaries is in compliance with all Requirements of Law (including all Health Care Laws and Public Health Laws) applicable to it or its property and all indentures, agreements and other instruments binding upon it or its property.

SECTION 3.08. Investment Company Status. No Loan Party is or is required to be registered as an "investment company" under the Investment Company Act of 1940.

SECTION 3.09. Taxes. Each of the Borrower and the Subsidiaries has filed or caused to be filed all Federal and other material Tax returns and reports required to have been filed and has paid or caused to be paid all Taxes required to have been paid by it, except (a) any Taxes that are being contested in good faith by appropriate proceedings and for which the Borrower or such Subsidiary, as applicable, has set aside on its books adequate reserves in accordance with GAAP or (b) to the extent that the failure to do so is not reasonably likely, individually or in the aggregate, to result in a Material Adverse Effect.

SECTION 3.10. ERISA. No ERISA Event has occurred, or is reasonably likely to occur that, when taken together with all other such ERISA Events for which liability is reasonably likely to occur, is reasonably likely to result in a Material Adverse Effect. The present value of all accumulated benefit obligations under each Plan did not, as of the date of the most recent financial statements reflecting such amounts, exceed the fair value of the assets of such Plan, except as would not reasonably be likely to result in a Material Adverse Effect.

SECTION 3.11. Reports. As of the Effective Date, none of the other written reports, financial statements, certificates or other written information furnished by or on behalf of any Loan Party to the Administrative Agent or any Lender in connection with the negotiation of this Agreement or any other Loan Document or delivered hereunder or thereunder (as modified or supplemented by other information so furnished and taken as a whole) contains any material misstatement of fact or omits to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, provided that the foregoing shall not apply to any projected financial

information other than the projected financial information included in such information and with respect to such projected financial information, the Borrower represents only that such information was prepared in good faith based upon assumptions believed by it to be reasonable at the time delivered.

SECTION 3.12. Subsidiaries. As of the Effective Date, the Borrower does not have any subsidiaries other than the Subsidiaries listed on Schedule 3.12. Schedule 3.12 sets forth the name of, and the ownership or beneficial interest of the Borrower in, each Subsidiary and identifies whether such Subsidiary is a Subsidiary Loan Party.

SECTION 3.13. Insurance. Schedule 3.13 sets forth a description of all insurance maintained by or on behalf of the Borrower and the Subsidiaries as of the Effective Date. As of the Effective Date, all premiums in respect of such insurance have been paid. The Borrower believes that the insurance maintained by or on behalf of the Borrower and the Subsidiaries is adequate.

SECTION 3.14. Labor Matters. As of the Effective Date, there are no strikes, lockouts or slowdowns against the Borrower or any Subsidiary pending or, to the knowledge of the Borrower, threatened in writing. The hours worked by and payments made to employees of the Borrower or the Subsidiaries have not been in violation of the Fair Labor Standards Act or any other applicable Federal, state, local or foreign law dealing with such matters in any manner. All payments due from the Borrower or any Subsidiary, or for which any claim may be made against the Borrower or any Subsidiary, on account of wages and employee health and welfare insurance and other benefits, have been paid or accrued as a liability on the books of the Borrower or such Subsidiary. The consummation of the Transactions will not give rise to any right of termination or right of renegotiation on the part of any union under any collective bargaining agreement to which the Borrower or any Subsidiary is bound. Set forth on Schedule 3.14 is a list and description (including dates of termination) of all collective bargaining or similar agreements between or applicable to the Borrower or any of its Subsidiaries and any union, labor organization or other bargaining agent in respect of the employees of the Borrower or any of its Subsidiaries.

SECTION 3.15. Solvency. Immediately after the consummation of the Transactions to occur on the Effective Date, (a) the fair value of the assets of the Borrower, and its subsidiaries, on a consolidated basis, at fair valuation, exceeds, on a consolidated basis, their debts and liabilities, subordinated, contingent or otherwise, (b) the present fair saleable value of the property of the Borrower and its subsidiaries, on a consolidated basis, is greater than the amount that will be required to pay the probable liability, on a consolidated basis, of their debts and other liabilities, subordinated, contingent or otherwise, as such debts and other liabilities become absolute and matured, (c) the Borrower and its subsidiaries, on a consolidated basis, are able to pay their debts and liabilities, subordinated, contingent or otherwise, as such liabilities become absolute and matured and (d) the Borrower and its subsidiaries, on a consolidated basis, do not have unreasonably small capital with which to conduct the business in which they are engaged as such business is now conducted and is proposed to be conducted following the date hereof.

SECTION 3.16. Margin Regulations. The Borrower is not engaged nor will it engage, principally or as one of its important activities, in the business of purchasing or carrying margin stock (within the meaning of Regulation U issued by the Board), or extending credit for the purpose of purchasing or carrying margin stock, and no proceeds of any Borrowings will be used for any purpose that violates Regulation U.

SECTION 3.17. Patriot Act.

(a) Neither the Borrower nor any Subsidiary is in violation of any requirement of applicable Law relating to terrorism or money laundering ("Anti-Terrorism Laws"), including Executive

Order No. 13224 on Terrorist Financing, effective September 24, 2001 (the "Executive Order"), and the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001, Public Law 107-56 (the "USA Patriot Act").

(b) Neither the Borrower nor any Subsidiary nor, to the knowledge of the Borrower, any broker or other agent of the Borrower or any of its Subsidiaries acting or benefiting in any capacity in connection with the Loans is any of the following:

(i) a Person that is listed in the annex to, or is otherwise subject to the provisions of, the Executive Order;

(ii) a Person owned or controlled by, or acting for or on behalf of, any Person that is listed in the annex to, or is otherwise subject to the provisions of, the Executive Order;

(iii) a Person with which any Lender is prohibited from dealing or otherwise engaging in any transaction by any Anti-Terrorism Law;

(iv) a Person that commits, threatens or conspires to commit or supports "terrorism" as defined in the Executive Order; or

(v) a Person that is named as a "specially designated national and blocked person" on the most current list published by the U.S. Treasury Department Office of Foreign Assets Control ("OFAC") at its official website or any replacement website or other replacement official publication of such list.

(c) Neither the Borrower nor any of its Subsidiaries and, to the knowledge of the Borrower, no broker or other agent of the Borrower or any of its Subsidiaries acting in any capacity in connection with the Loans (i) conducts any business or engages in making or receiving any contribution of funds, goods or services to or for the benefit of any person described in Section 3.17(b) above in violation of any Anti-Terrorism Law, (ii) deals in, or otherwise engages in any transaction relating to, any property or interests in property blocked pursuant to the Executive Order in violation of any Anti-Terrorism Law, or (iii) engages in or conspires to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in any Anti-Terrorism Law.

SECTION 3.18. Anti-Corruption Laws. The Borrower has implemented and maintains in effect policies and procedures reasonably designed to ensure compliance by the Borrower, its Subsidiaries, and their respective directors, officers, employees and agents with applicable Anti-Corruption Laws, and except as is not reasonably likely to result in, individually or in the aggregate, a Material Adverse Effect, the Borrower, its Subsidiaries and their respective officers and employees and to the knowledge of the Borrower, its directors and agents, are in compliance with Anti-Corruption Laws in all material respects. No part of the proceeds of any Loans hereunder will be used directly, by the Borrower or any Subsidiary or indirectly, to the knowledge of the Borrower, in order to obtain, retain or direct business or obtain any improper advantage, in violation of any Anti-Corruption Laws.

SECTION 3.19. Intellectual Property; Licenses, Etc. The Borrower and the Subsidiaries own, license or possess the right to use, all of the trademarks, service marks, trade names, domain names, copyrights, patents, patent rights, licenses, technology, software, know-how database rights, design rights and other intellectual property rights (collectively, "IP Rights") that are reasonably necessary for the operation of their respective businesses as currently conducted, and, without conflict with the rights of any Person, except to the extent such conflicts, either individually or in the aggregate, are not reasonably likely to result in a Material Adverse Effect. The Borrower and the Subsidiaries in the operation of their respective

businesses as currently conducted do not infringe upon any rights held by any Person except for such infringements, individually or in the aggregate, which are not reasonably likely to result in a Material Adverse Effect. No claim or litigation regarding any of the IP Rights, owned by the Borrower or the Subsidiaries is pending or, to the knowledge of the Borrower, threatened against the Borrower or any Subsidiary in which the amount of damages claimed is $2,500,000 or more.

Except pursuant to licenses and other user agreements entered into by the Borrower or any Subsidiary in the ordinary course of business, on and as of the date hereof (i) each such Person owns and possesses the right to use, and has done nothing to authorize or enable any other Person to use, any copyright, patent or trademark listed in Section 10(a), 10(b) or 10(c) of the Perfection Certificate and (ii) all registrations listed in Section 10(c) of the Perfection Certificate are valid and in full force and effect, except, in each case, to the extent failure to own or possess such right to use or of such registrations to be valid and in full force and effect is not reasonably likely, individually or in the aggregate, to result in a Material Adverse Effect.

SECTION 3.20. [Reserved].

SECTION 3.21. Environmental Compliance.

(a) Except with respect to any matters that have been resolved in compliance with Environmental Law or that, individually or in the aggregate, are not reasonably likely to result in a Material Adverse Effect, (i) neither the Borrower nor any Subsidiary has failed to comply with any Environmental Law or to obtain, maintain or comply with any required Environmental Permit or to provide any notification required under any Environmental Law or has become subject to any Environmental Liability, and (ii) neither the Borrower nor any Subsidiary has received any written notice of any claims, actions, suits, or proceedings alleging potential liability or violation of, any Environmental Law, and to Borrower's knowledge no such claims, actions, suits or proceedings are threatened.

(b) Except as not reasonably likely to result in, individually or in the aggregate, a Material Adverse Effect, (i) none of the properties currently or formerly owned, leased or operated by the Borrower or any of the Subsidiaries is listed or proposed for listing on the NPL or on the CERCLIS or any analogous foreign, state or local list; (ii) there are no underground storage tanks or surface impoundments, septic tanks, pits, sumps or lagoons in which Hazardous Materials are being or have been treated, stored or disposed on any property currently owned, leased or operated by the Borrower or any of the Subsidiaries, or, to the Borrower's knowledge, on any property formerly owned or operated by the Borrower or any of its Subsidiaries; (iii) there is no asbestos or asbestos-containing material in violation of Environmental Law at or on any facility, equipment or property currently owned or operated by the Borrower or any of the Subsidiaries; and (iv) to the Borrower's knowledge, there has been no Release of Hazardous Materials by any Person on any property currently or formerly owned, leased or operated by the Borrower or any of the Subsidiaries and there has been no Release of Hazardous Materials by the Borrower or any of the Subsidiaries at any other location.

(c) To the Borrower's knowledge, the properties owned, leased or operated by the Borrower or the Subsidiaries do not contain any Hazardous Materials in amounts or concentrations which (i) constitute, or constituted a violation of, or (ii) require remedial action under, Environmental Laws, which violations and remedial actions, individually or in the aggregate, are reasonably likely to result in a Material Adverse Effect.

(d) Neither the Borrower nor any Subsidiary are conducting or financing, either individually or together with other potentially responsible parties, any investigation or assessment or remedial or response action relating to any actual or threatened Release of Hazardous Materials at any site, location or operation, either voluntarily or pursuant to the order of any Governmental Authority or the requirements of any Environmental Law except for such investigation or assessment or remedial or response action that, individually or in the aggregate, is not reasonably likely to result in a Material Adverse Effect.

(e) To the Borrower's knowledge, all Hazardous Materials generated, used, treated, handled or stored at, or transported to or from, any property currently or formerly owned or operated by the Borrower, or any Subsidiary have been disposed of in a manner compliant with Environmental Law, except to the extent not reasonably likely to result in, individually or in the aggregate, a Material Adverse Effect.

(f) Except for environmental provisions contained within leases executed by Borrower or any Subsidiary, and except as would not be reasonably likely to result in, individually or in the aggregate, a Material Adverse Effect, neither the Borrower nor any Subsidiary has contractually assumed any liability or obligation under or relating to any Environmental Law.

SECTION 3.22. Health Care Regulatory Matters.

(a) As of the Effective Date, each Loan Party is in compliance with, and is conducting and, for the six years preceding the Effective Date, has conducted its respective business and operations in compliance with, the requirements of all Health Care Laws and Public Health Laws, except for such non-compliance which, individually or in the aggregate, is not reasonably likely to result in a Material Adverse Effect.

(b) The Borrower and its Subsidiaries have all Registrations issued or supervised by any Public Health Regulatory Agency or other Governmental Authority required to conduct their respective businesses as currently conducted, except where the failure to have all such Registrations could not reasonably be expected to, individually or in the aggregate, result in Material Regulatory Liabilities. Each of such Registrations is valid and subsisting in full force and effect, except where the failure to be so could not reasonably be expected to, individually or in the aggregate, result in Material Regulatory Liabilities. To the knowledge of the Borrower and its Subsidiaries, none of any Public Health Regulatory Agency or any other Governmental Authority is considering limiting, suspending, or revoking such party's submission to any Public Health Regulatory Agency or any other Governmental Authority; provided, that, in each case of the foregoing clauses, where such false or misleading information or omissions could not reasonably be expected to, individually or in the aggregate, result in Material Regulatory Liabilities and excluding any material limitations or omissions that were clearly disclosed to the recipient of a listed item. The Borrower and its Subsidiaries have not failed to fulfill and perform their obligations which are due under each Registration held by or licensed to them, and no event has occurred or condition or state of facts exists which would constitute a breach or default under any such Registration, in each case that would reasonably be expected to cause Material Regulatory Liabilities. To the knowledge of the Borrower and its Subsidiaries, any third party that is a manufacturer or contractor for the Borrower and its Subsidiaries is in compliance with all Registrations from any Public Health Regulatory Agency and any other Governmental Authority insofar as they pertain to the manufacture of product components or products or the analysis or generation of data for the Borrower and its Subsidiaries, except where the failure to so be in compliance would not reasonably be expected to, individually or in the aggregate, result in Material Regulatory Liabilities.

(c) All products developed, manufactured, tested, distributed, marketed, or sold by or on behalf of the Borrower and its Subsidiaries that are subject to the jurisdiction of any Public Health Regulatory Agency or any other Governmental Authority (x) have been and are being developed, tested, manufactured, investigated, distributed, marketed, and sold in compliance with the applicable Public Health Laws or any other applicable Law, including, without limitation and to the extent applicable, in material compliance with any pre-market notification or pre-market approval requirements, good manufacturing practices, quality system requirements, labeling requirements, advertising requirements, record keeping

requirements and adverse event reporting requirements, and (y) have been and are being tested, investigated, distributed, marketed, and sold in compliance with the applicable Public Health Laws or any other applicable Law, except, in each case of clauses (x) and (y), where such noncompliance would not reasonably be expected to, individually or in the aggregate, result in Material Regulatory Liabilities.

(d) The Borrower and its Subsidiaries have not received and are not subject to any administrative or regulatory action, warning letter, notice of violation letter, or other similar written notice, complaint or inquiry made by any Public Health Regulatory Agency or any other Governmental Authority asserting that the development, testing, investigation, manufacture, distribution, marketing or sale of the products of any Borrower or any of its Subsidiaries is not in compliance with any applicable law, except those noncompliance that could not reasonably be expected to, individually or in the aggregate, result in Material Regulatory Liabilities. To the extent applicable, (x) the Borrower and its Subsidiaries have made all notifications, submissions, and reports required by any such Governmental Authority, and (y) all such notifications, submissions and reports provided by the Borrower and its Subsidiaries were, to their knowledge, true, complete, and correct in all material respects as of the date of submission to any Public Health Regulatory Agency or any other Governmental Authority, except, where such failure to comply with (x) or (y) could not reasonably be expected to, individually or in the aggregate, result in Material Regulatory Liabilities.

(e) No product of the Borrower or its Subsidiaries has been seized, withdrawn, recalled, detained, or subject to a suspension of manufacturing, and, to the knowledge of the Borrower, there are no facts or circumstances reasonably likely to cause (x) the seizure, denial, withdrawal, recall, detention, field notification, field correction, safety alert or suspension of manufacturing relating to any such product; (y) a material adverse change in the labeling of any such product; or (z) a termination, seizure or suspension of marketing of any such product, except, in each case, where such events could not reasonably be expected to, individually or in the aggregate, result in Material Regulatory Liabilities. No proceedings in the United States or any other jurisdiction seeking the withdrawal, recall, suspension, import detention, or seizure of any such product are pending or, to the knowledge the Borrower or its Subsidiaries, threatened against the Borrower and its Subsidiaries, except where such proceeding could not reasonably be expected to, individually or in the aggregate, result in Material Regulatory Liability.

SECTION 3.23. Deposit Accounts and Securities Accounts. Schedule 3.23 sets forth a complete and accurate list as of the Effective Date of all deposit, checking, and other bank accounts, all securities and other accounts maintained with any broker dealer or other securities intermediary, and all other similar accounts maintained by each Loan Party, together with a description thereof (including the bank, broker dealer, or securities intermediary at which each such account is maintained and the account number and the purpose thereof). All such accounts shall be subject to Control Agreements to the extent required by the Collateral Agreement.

SECTION 3.24. Use of Proceeds. The proceeds of the Term Loans will used by the Borrower for the purposes specified in Section 5.11 of this Agreement.

SECTION 3.25. Absence of Undisclosed Liabilities. Neither the Borrower nor any Subsidiary has any Liabilities or obligations of any nature (whether known or unknown, accrued, absolute, contingent or otherwise, and whether due or to become due), whether based on strict liability, negligence, breach of warranty (express or implied), other than Liabilities (a) accrued, reflected or reserved against in the Annual Financial Statements dated December 31, 2021 or (b) that are current liabilities incurred in the ordinary course of business of the Borrower and its Subsidiaries since December 31, 2021.

ARTICLE IV

Conditions

SECTION 4.01. Effective Date. The obligations of the Lenders to make Loans hereunder shall not become effective until the date on which each of the following conditions is satisfied (or waived):

(a) There shall not have occurred a Material Adverse Effect on the Borrower and its Subsidiaries, taken as a whole, since June 30, 2022.

(b) The Administrative Agent shall have received unaudited consolidated balance sheets and related statements of income and cash flows of the Borrower for the fiscal quarter ending June 30, 2022.

(c) The Administrative Agent shall have received financial projections for the Borrower and its subsidiaries for the three year period following the Effective Date.

(d) The Administrative Agent shall have received from each party hereto either (i) a counterpart of this Agreement signed on behalf of such party or (ii) written evidence satisfactory to the Administrative Agent (which may include telecopy transmission of a signed signature page of this Agreement) that such party has signed a counterpart of this Agreement.

(e) The Administrative Agent shall have received a Borrowing Request in substantially the form attached as Exhibit E, which shall have been delivered in accordance with the requirements hereof.

(f) The Administrative Agent shall have received the Confidential Disclosure Letter.

(g) The Administrative Agent shall have received a written opinion (addressed to the Administrative Agent and the Lenders and dated the Effective Date) of Cooley LLP, counsel for the Borrower in form reasonably satisfactory to the Administrative Agent, and covering such matters relating to the Loan Parties, the Loan Documents or the Transactions as the Administrative Agent shall reasonably request.

(h) The Administrative Agent shall have received:

(i) The charter, articles or certificate of organization or incorporation or comparable document of each Loan Party, certified as of a recent date prior to the Effective Date by the Secretary of State (or comparable public official) of such Person's jurisdiction of incorporation or formation;

(ii) A certificate of good standing (or comparable certificate) for each Loan Party, certified as of a recent date prior to the Effective Date by the Secretary of State (or comparable public official) of such Person's jurisdiction of incorporation or formation; and

(iii) A certificate of the Secretary or an Assistant Secretary (or comparable officer) of each Loan Party, dated the Effective Date, certifying (A) that attached thereto is a true and correct copy of (x) the charter, articles or certificate of organization or incorporation or comparable document and (y) bylaws or other organizational or governing documents of such Person as in effect on the Effective Date; (B) that attached thereto are true and correct copies of resolutions duly adopted by the board of directors or other

governing body of such Person and continuing in effect, which authorize the execution, delivery and performance by such Person each Loan Document executed or to be executed by such Person and the consummation of the transactions contemplated thereby; and (C) the incumbency, signatures and authority of the officers of such Person authorized to execute, deliver and perform the Loan Documents to be executed by such Person.

(i) The Administrative Agent shall have received a certificate from a Financial Officer of the Borrower confirming of the absence of any material action, suit, investigation or proceeding, pending or threatened, that is reasonably likely to result in a Material Adverse Effect or could materially affect (i) the ability of the Borrower or any Subsidiary to perform its obligations under the Loan Documents or (ii) the rights and remedies of the Lenders and Agents under the Loan Documents.

(j) The Administrative Agent shall have received a certificate from a Financial Officer in substantially the form attached as Exhibit J hereto, certifying that the Borrower and the Subsidiaries, on a consolidated basis after giving effect to the Transactions, are solvent.

(k) The Administrative Agent shall have received a certificate from a Financial Officer of the Borrower, confirming satisfaction of the conditions set forth in Sections 4.01(o) and (p).

(l) So long as requested at least ten Business Days prior to the Effective Date, the Lenders and the Administrative Agent shall have received, at least five days prior to the Effective Date, a duly executed IRS Form W-9 (or other applicable tax form) and all documentation and other information required by regulatory authorities concerning the Loan Parties under applicable "know your customer" and anti-money laundering rules and regulations, including, without limitation, the USA Patriot Act.

(m) Payment of all fees and expenses required to be paid on the Effective Date shall have been paid, to the extent invoiced in reasonable detail with supporting documentation, from the proceeds of the initial funding under this Agreement.

(n) The Collateral Agent shall have, for the benefit of the Lenders, a first priority security interest (subject to Permitted Encumbrances) in all Collateral in which a lien can be perfected by (i) the filing of a Uniform Commercial Code financing statement, and/or (ii) in the case of Equity Interests or other certificated security of the Borrower and the Subsidiary Loan Parties, possession of such Equity Interests or other certificated securities and the Collateral Agent shall have received (i) the duly executed Perfection Certificate and (ii) the duly executed Collateral Agreement.

(o) The representations and warranties of each Loan Party set forth in the Loan Documents shall be true and correct in all material respects (except to the extent any such representation or warranty is qualified by "materially", "Material Adverse Effect" or a similar term, in which case such representation and warranty shall be true and correct in all respects) on and as of the date of such Borrowing, except to the extent such representations and warranties expressly relate to an earlier date (in which case such representations and warranties shall be true and correct in all material respects (except to the extent any such representation or warranty is qualified by "materially", "Material Adverse Effect" or a similar term, in which case such representation and warranty shall be true and correct in all respects) as of such earlier date).

(p) At the time of and immediately after giving effect to the Borrowing of the Effective Date Term Loans on the Effective Date, no Default or Event of Default shall have occurred and be continuing.

The Administrative Agent shall notify the Borrower and the Lenders of the Effective Date, and such notice shall be conclusive and binding.

ARTICLE V

Affirmative Covenants

Until the Commitments have expired or been terminated and the principal of and interest on each Loan and all fees, expenses and other amounts payable under any Loan Document shall have been paid in full, each of the Borrower covenants and agrees with the Lenders that:

SECTION 5.01. Financial Statements and Other Information. The Borrower will furnish to the Administrative Agent (for distribution to each Lender):

(a) within (x) 150 days after the end of the fiscal year ended December 31, 2022 and (y) 120 days after the end of each fiscal year of the Borrower thereafter, in each case, subject to any SEC Extension (if applicable), its audited consolidated balance sheet as of the end of such fiscal year and statements of operations, changes in stockholders' equity and cash flows for such fiscal year, and the related notes thereto, and setting forth in each case in comparative form the figures for the previous fiscal year, all reported on by an independent public accountant of recognized national standing (without a "going concern" or like qualification or exception (other than a disclosure, an exception or a qualification solely resulting from (1) the impending maturity of any Indebtedness or (2) an actual Default under the Financial Performance Covenants) and without any qualification or exception as to the scope of such audit) to the effect that such consolidated financial statements present fairly in all material respects the financial condition and results of operations of the Borrower and the Subsidiaries on a consolidated basis in accordance with GAAP consistently applied;

(b) within 60 days after the end of each fiscal quarter of the Borrower, commencing with the fiscal quarter ended September 30, 2022, in each case, subject to any SEC Extension (if applicable) its consolidated balance sheet as of the end of such fiscal quarter, and statements of operations and changes in stockholders' equity, in each case for such fiscal quarter, and setting forth in each case in comparative form the figures for the corresponding period or periods of (or, in the case of the balance sheet, as of the end of) the previous fiscal year, all certified by a Financial Officer as presenting fairly in all material respects the financial condition and results of operations of the Borrower and the Subsidiaries on a consolidated basis in accordance with GAAP consistently applied, subject to normal year-end audit adjustments and the absence of footnotes;

(c) prior to an IPO, within 35 days after the end of each of the first two months of each fiscal quarter of the Borrower, commencing with the month ending August 31, 2022, monthly reports;

(d) concurrently with any delivery of financial statements under Section 5.01(a) or in the case of the first three fiscal quarters of each fiscal year in 5.01(b), a certificate of a Financial Officer (i) certifying as to whether a Default or Event of Default has occurred and, if a Default or Event of Default has occurred, specifying the details thereof and any action taken or proposed to be taken with respect thereto and (ii) setting forth reasonably detailed calculations demonstrating compliance with the Financial Performance Covenants;

(e) within 60 days after the commencement of each fiscal year of the Borrower, a detailed consolidated budget for such fiscal year (including a projected consolidated balance sheet and consolidated statements of projected operations and cash flows as of the end of and for such fiscal year);

(f) [reserved];

(g) promptly after the same become publicly available, copies of all periodic and other reports, proxy statements and other materials filed by the Borrower or any Subsidiary with the SEC or with any national securities exchange, as applicable;

(h) [reserved]; and

(i) promptly following any written request therefor, such other information regarding the operations, business affairs and financial condition of the Borrower, any Subsidiary or any Plan, or compliance with the terms of any Loan Document, as the Administrative Agent or any Lender through the Administrative Agent may reasonably request, in each case subject to the limitations set forth herein.

Notwithstanding the foregoing, the obligations this Section 5.01 may be satisfied with respect to information of the Borrower or any Subsidiary by furnishing the applicable financial statements of the Borrower (or any direct or indirect parent of the Borrower) Form 10-K, 10-Q or 8-K, as applicable, filed with the SEC; provided that, with respect to clauses (A) and (B), (i) to the extent such information relates to a parent of the Borrower, such information is accompanied by consolidating information that explains in reasonable detail the differences between the information relating to the Borrower (or such parent), on the one hand, and the information relating to the Borrower on a standalone basis, on the other hand and (ii) to the extent such information is in lieu of information required to be provided under Section 5.01(a), such materials are accompanied by a report and opinion of PricewaterhouseCoopers LLP or such other firm reasonably acceptable to the Administrative Agent or any other independent registered public accounting firm reasonably determined to be of nationally recognized standing, which report and opinion shall be prepared in accordance with generally accepted auditing standards and shall not be subject to any "going concern" or like qualification or exception (other than solely resulting from (1) the impending maturity of any Indebtedness or (2) an Default under the Financial Performance Covenants) or any qualification or exception as to the scope of such audit.

Documents required to be delivered pursuant to Section 5.01(a), (b) or (f) (to the extent any such documents are included in materials otherwise filed with the SEC) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which the Borrower notifies the Administrative Agent that it has filed such documents on the SEC's EDGAR system (or any successor system adopted by the SEC).

Notwithstanding anything to the contrary herein, neither Borrower nor any Subsidiary shall be required to deliver, disclose, permit the inspection, examination or making of copies of or excerpts from, or any discussion of, any document, information, or other matter (i) that constitutes a non-financial trade secret or non-financial proprietary information, (ii) in respect of which disclosure to the Administrative Agent (or any Lender (or their respective representatives or contractors)) is prohibited by applicable law, fiduciary duty or binding agreement, (iii) that is subject to attorney-client or similar privilege or constitutes attorney work product or (iv) with respect to which any Loan Party or any Subsidiary owes confidentiality obligations (to the extent not created in contemplation of such Loan Party's or Subsidiary's obligations under this Section 5.01) to any third party.

SECTION 5.02. Notices of Material Events. The Borrower will furnish to the Administrative Agent (for distribution to each Lender), written notice of the following promptly after obtaining knowledge thereof:

(a) the occurrence of any Default or Event of Default, which notice shall specify the nature thereof, the period of existence thereof and what action the applicable Loan Parties propose to take with respect thereto;

(b) within five (5) Business Days after an authorized officer of any Loan Party or any of its Subsidiaries obtains knowledge thereof, notice from an authorized officer of the Borrower of (i) the commencement of, or any material development in, any litigation, action, proceeding or labor controversy or proceeding affecting any Loan Party or any Subsidiary of any Loan Party or its respective property (including in respect of Environmental Laws and the Borrower's and its Subsidiaries' intellectual property) (A) in which the amount of damages could reasonably be expected to exceed $5,000,000, (B) which is reasonably likely to result in a Material Adverse Effect, or (C) which purports to affect the legality, validity or enforceability of any Loan Document or (ii) the occurrence of any material adverse development with respect to any litigation, action, proceeding or labor controversy described in Schedule 3.06, and, in each case together with a statement of an authorized officer of the Borrower, which notice shall specify the nature thereof, and what actions the applicable Loan Parties propose to take with respect thereto, and, to the extent the Collateral Agent requests, copies of all documentation related thereto;

(c) the occurrence of any ERISA Event which could reasonably be expected to result in a Material Adverse Effect;

(d) within five (5) Business Days after any Loan Party obtains knowledge of the occurrence of a material breach or default or notice of termination by any party under, or material amendment entered into by any party to, any document or agreement in respect of Subordinated Indebtedness (including, without limitation, the Google Note), a statement of an authorized officer of the Borrower setting forth details of such material breach or default or notice of termination and the actions taken or to be taken with respect thereto and, if applicable, a copy of such amendment;

(e) within ten (10) Business Days after, receipt thereof, copies of all "management letters" submitted to any Loan Party by the independent public accountants referred to in Section 5.01 in connection with each audit made by such accountants;

(f) immediately upon becoming aware thereof, notice (whether involuntary or voluntary) of the bankruptcy, insolvency, reorganization of any Loan Party, or the appointment of any trustee in connection with or anticipation of any such occurrence, or the taking of any step by any Person in furtherance of any such action or occurrence;

(g) promptly upon the receipt thereof, any written notice received by the Borrower or any Subsidiary that the FDA or other comparable Governmental Authority (including any Public Health Regulatory Agency) is (i) limiting, suspending or revoking any Registration of the Borrower or any Subsidiary, (ii) changing the market classification or labeling of the products of the Borrower or any Subsidiary under any such Registration, (iii) considering any of the foregoing, or (iv) considering or implementing any other such regulatory action either directly or indirectly involving the Borrower or any Subsidiary or their products, except where the regulatory action is focused on the further manufacturing, processing, packaging/repackaging, labeling/relabeling, marketing, use, or distribution of products by customers of the Borrower or any Subsidiary or other downstream purchasers or recipients; provided that, in each case of the foregoing clauses (i) through (iv), where such action is not reasonably likely to result in (x) an obligation in excess of $5,000,000, individually or in the aggregate, or (y) a Material Adverse Effect;

(h) promptly upon the receipt thereof, (i) any FDA Section 305 notice of hearing before report of criminal violation (21 U.S.C. § 335) or other written notice regarding the planned or actual institution of criminal proceedings against the Borrower or any Subsidiary, (ii) any written notice from any

Governmental Authority proposing or threatening that any product of the Borrower or any Subsidiary will become the subject of seizure, embargo, withdrawal of marketing authorization, recall, detention, or suspension of manufacturing, (iii) any FDA warning letter, untitled letter, or Form FDA 483 notice of inspectional observations, and/or other similar written notice, complaint or inquiry made by the FDA or any comparable Governmental Authority (including any Public Health Regulatory Agency) asserting that the manufacture, distribution, marketing or sale of the products of the Borrower or any Subsidiary is not in compliance with any applicable law, (iv) any written notice asserting that a product of the Borrower or any Subsidiary has been or is being seized, embargoed, withdrawn, recalled, detained, or subject to a suspension of manufacturing by any Governmental Authority, or (v) any written notice of the commencement, or the threatened commencement, of any proceedings in the United States or any other applicable jurisdiction seeking the withdrawal, recall, suspension, import detention, or seizure of any product of any of the Borrower or any Subsidiary, except, in each case of the foregoing clauses (i) through (v), where such action could not reasonably be expected to result in (x) an obligation in excess of $5,000,000, individually or in the aggregate, or (y) a Material Adverse Effect;

(i) concurrently with the delivery of the financial information pursuant to Section 5.01(a), (b) or (c), information regarding any material amendment to the organizational documents of any Loan Party or changes in accounting or financial reporting practices, fiscal years or fiscal quarters of the Loan Parties, a certificate, certifying to the extent of any change from a prior certification, from an authorized officer of the Borrower notifying the Agents of such amendment and attaching thereto any relevant documentation in connection therewith; and

(j) any other development that results in, or is reasonably likely, individually or in the aggregate, to result in, a Material Adverse Effect.

Each notice delivered under this Section 5.02 shall be accompanied by a statement of a Financial Officer or other executive officer of the Borrower setting forth the details of the event or development requiring such notice and any action taken or proposed to be taken with respect thereto.

SECTION 5.03. Information Regarding Collateral.

(a) The Borrower will furnish to the Collateral Agent prompt written notice (but in no event later than 10 days following such change) of any change (i) in any Loan Party's legal name, (ii) in the jurisdiction of incorporation or organization of any Loan Party or (iii) in any Loan Party's organizational identification number. The Borrower agrees not to effect or permit any change referred to in the preceding sentence unless all filings have been made under the Uniform Commercial Code or otherwise that are required in order for the Collateral Agent to continue at all times following such change to have a valid, legal and perfected security interest in all the Collateral.

(b) Each year, at the time of delivery of annual financial statements pursuant to Section 5.01(a), the Borrower shall deliver to the Collateral Agent a certificate executed by a Financial Officer of the Borrower setting forth the information required pursuant to the Perfection Certificate or confirming that there has been no change in such information since the date of the Perfection Certificate delivered on the Effective Date or the date of the most recent certificate delivered pursuant to this Section 5.03.

SECTION 5.04. Existence; Conduct of Business; Public Health Laws. The Borrower will, and will cause each of the Subsidiaries to, do or cause to be done all things necessary to preserve, renew and keep in full force and effect its legal existence and the rights, qualifications, permits, approvals, accreditations, authorizations, licenses, franchises, patents, copyrights, trademarks and trade names material to the conduct of its business; provided that the foregoing shall not prohibit any merger, consolidation, liquidation or dissolution permitted under Section 6.03. Without limiting the generality of

the foregoing, the Borrower will comply, and will cause each other Loan Party to comply, with all applicable Health Care Laws and Public Health Laws relating to the operation of such Person's business, except where non-compliance is not reasonably likely to result in, individually or in the aggregate, Material Regulatory Liabilities. All products developed, manufactured, tested, investigated, distributed or marketed by or on behalf of the Borrower and its Subsidiaries that are subject to the jurisdiction of the FDA or any comparable Governmental Authority shall be developed, tested, manufactured, investigated, distributed and marketed in compliance with the applicable Public Health Laws and any other applicable Requirement of Law, including, without limitation, pre-market notification, good manufacturing practices, labeling, advertising, record-keeping, and adverse event reporting, except where the failure to comply is not reasonably likely to result, either individually or in the aggregate, in Material Regulatory Liabilities.

SECTION 5.05. Payment of Taxes. The Borrower will, and will cause each of the Subsidiaries to, pay its Tax liabilities, before the same shall become delinquent or in default, except where (a) the validity or amount thereof is being contested in good faith by appropriate proceedings and the Borrower or such Subsidiary has set aside on its books adequate reserves with respect thereto in accordance with GAAP or (b) the failure to make payment pending such contest is not reasonably likely to, individually or in the aggregate, result in a Material Adverse Effect.

SECTION 5.06. Maintenance of Properties. The Borrower will, and will cause each of the Subsidiaries to, (a) keep and maintain all tangible property material to the conduct of its business in good working order and condition, ordinary wear and tear and casualty and condemnation excepted and (b) with respect to IP Rights owned by the Borrower and its Subsidiaries, maintain, renew, protect and defend such IP Rights that are material to the conduct of the business of the Borrower and its Subsidiaries, on a consolidated basis; provided that the foregoing shall not prohibit any merger, consolidation, liquidation or dissolution permitted under Section 6.03 or any Disposition permitted under Section 6.05.

SECTION 5.07. Insurance. The Borrower will, and will cause each of the Subsidiaries to, maintain, with financially sound and reputable insurance companies (which may include self-insurance), (a) insurance in such amounts (with no greater risk retention) and against such risks as are customarily maintained by companies of established repute engaged in the same or similar businesses operating in the same or similar locations and (b) all insurance required to be maintained pursuant to the Security Documents; each insurance policy maintained by any Loan Party pursuant to this sentence shall name the Collateral Agent as additional insured or loss payee if permitted by law and the Borrower shall use commercially reasonable efforts to cause each such insurance policy to provide that no cancellation, material reduction in amount or material change in coverage thereof shall be effective until at least 30 days (10 days in the case of non-payment) after receipt by the Collateral Agent of written notice thereof; provided that the foregoing shall not prohibit any merger, consolidation, liquidation or dissolution permitted under Section 6.03. The Borrower will furnish to the Lenders, upon written request of the Administrative Agent, information in reasonable detail as to the insurance so maintained. The Borrower will, with respect to each Mortgaged Property, obtain flood insurance in such total amount as the Administrative Agent or the Required Lenders may from time to time reasonably require (but such amount may be no less than that amount required under the National Flood Insurance Program as set forth in the Flood Disaster Protection Act of 1973, as amended from time to time), if at any time the area in which any improvements located on any Mortgaged Property is designated a "flood hazard area" in any Flood Insurance Rate Map published by the Federal Emergency Management Agency (or any successor agency), and otherwise comply with the National Flood Insurance Program as set forth in the Flood Disaster Protection Act of 1973, as amended from time to time.

SECTION 5.08. Casualty and Condemnation. The Borrower (a) will furnish to the Administrative Agent and the Lenders prompt written notice of any casualty or other insured damage to any material portion of the Collateral or the commencement of any action or proceeding for the taking of

any material portion of the Collateral or interest therein under power of eminent domain or by condemnation or similar proceeding and (b) will ensure that the Net Proceeds of any such event (whether in the form of insurance proceeds, condemnation awards or otherwise) are collected and applied in accordance with the applicable provisions of this Agreement and the Security Documents.

SECTION 5.09. Books and Records; Inspection and Audit Rights. The Borrower will, and will cause each of the Subsidiaries to, keep proper books of record and account in which full, true and correct entries are made of all dealings and transactions in relation to its business and activities. The Borrower will, and will cause each of the Subsidiaries to, permit any representatives designated by the Administrative Agent, upon reasonable prior notice, to visit and inspect its properties during normal business hours, to examine and make extracts from its books and records, including any information relating to actual or potential compliance with or liability under Environmental Laws, and to discuss its affairs, finances and condition with its officers and independent accountants (provided that the Borrower shall be provided the opportunity to participate in any such discussions with its independent accountants), all at such reasonable times and as often as reasonably requested; provided that, the Administrative Agent shall not exercise such rights more often than one time during any calendar year absent the continuance of an Event of Default. Notwithstanding anything to the contrary in this Section 5.09, none of the Borrower nor any Subsidiary will be required to disclose or permit the inspection or discussion of, any document, information or other matter (i) that constitutes non-financial trade secrets or non-financial proprietary information, (ii) in respect of which disclosure to the Administrative Agent or any Lender (or their respective representatives or contractors) is prohibited by law or any binding agreement or (iii) that is subject to attorney client or similar privilege or constitutes attorney work product (it being understood, in the case of clauses (ii) and (iii) above, that the Borrower shall use its commercially reasonable efforts to communicate any requested information in a way that would not violate the applicable law or agreement or waive the applicable privilege).

SECTION 5.10. Compliance with Laws. The Borrower will, and will cause each of the Subsidiaries to comply with all Requirements of Law, including ERISA, Environmental Laws, Health Care Laws and Public Health Laws applicable to it, its operations and all property owned, operated and leased by any of them, except where the failure to do so, individually or in the aggregate, is not reasonably likely to result in a Material Adverse Effect.

SECTION 5.11. Use of Proceeds. The proceeds of the Effective Date Term Loans shall be used by the Borrower, solely (a) for working capital and general corporate purposes, (b) to finance growth initiatives, (c) to pay for operating expenses and (d) to pay the Transaction Costs. The proceeds of the First Amendment Effective Date Term Loans shall be used by the Borrower for (a) working capital and general corporate purposes, (b) to finance growth initiatives, (c) to pay for operating expenses and (d) to pay the costs, fees and expenses in connection with the consummation of the First Amendment. The proceeds of the Second Amendment Effective Date Term Loans shall be used by the Borrower for (a) working capital and general corporate purposes, (b) to finance growth initiatives, (c) to pay for operating expenses and (d) to pay the costs, fees and expenses in connection with the consummation of the Second Amendment. No part of the proceeds of any Loan will be used, whether directly or indirectly, for any purpose that entails a violation of any of the Regulations of the Board, including Regulations T, U and X.

SECTION 5.12. Additional Subsidiaries. If any additional Subsidiary is formed or acquired after the Effective Date, the Borrower will, within 60 days of such event, notify the Collateral Agent and the Administrative Agent thereof and cause the Collateral and Guarantee Requirement to be satisfied with respect to such Subsidiary (if it is a Subsidiary Loan Party, it being understood that such Loan Party shall not be required to fulfill any requirements not in the Collateral and Guarantee Agreement and is subject to any exclusions and exceptions) and with respect to any Equity Interest in such Subsidiary owned by or on behalf of any Loan Party; provided that the Collateral Agent may, in its reasonable judgment, grant extensions of time for compliance, or exceptions from compliance, with the provisions of this paragraph by any Loan Party.

SECTION 5.13. Further Assurances.

(a) The Borrower will, and will cause each Subsidiary Loan Party to, execute any and all further documents, financing statements, agreements and instruments, and take all such further actions (including the filing and recording of financing statements, fixture filings, mortgages, deeds of trust and other documents), which may be required under any applicable law, or which the Administrative Agent or the Required Lenders may reasonably request, to cause the Collateral and Guarantee Requirement to be and remain satisfied, all at the expense of the Loan Parties.

(b) If any material assets (including any Material Real Property but excluding any Excluded Assets or any other asset located outside the United States) or improvements thereto or any interest therein are acquired by the Borrower or any Subsidiary Loan Party after the Effective Date (other than assets constituting Collateral under the Collateral Agreement that become subject to the Lien in favor of the Collateral Agent upon acquisition thereof), the Borrower will promptly notify the Administrative Agent and the Lenders thereof and, if requested in writing by the Administrative Agent or the Required Lenders, the Borrower will cause such assets to be subjected to the Lien of the Security Documents securing the Obligations and will take, and cause the Subsidiary Loan Parties to take, such actions as shall be necessary or reasonably requested in writing by the Administrative Agent to grant and perfect such Liens, including actions described in Section 5.13(a), all at the expense of the Loan Parties, all within 90 days of such request, provided that the Collateral Agent may, in its reasonable judgment, grant extensions of time for compliance or exceptions with the provisions of this paragraph by any Loan Party. Notwithstanding anything to the contrary in this Agreement or any Security Document, no Loan Party shall be required to pledge or grant security interests in particular assets if, in the reasonable judgment of the Administrative Agent or the Collateral Agent, the costs of creating or perfecting such pledges or security interests in such assets (including any mortgage, stamp, intangibles or other tax) are excessive in relation to the benefits to the Lenders therefrom.

SECTION 5.14. Environmental Matters. Except, in each case, to the extent that the failure to do so is not reasonably likely to have, individually or in the aggregate, a Material Adverse Effect, the Borrower will comply, and make commercially reasonable efforts to cause all lessees and other Persons operating or occupying its properties to comply with all applicable Environmental Laws and Environmental Permits; obtain and renew all Environmental Permits necessary for its operations and properties; and, in each case to the extent the Borrower or any Subsidiary is required by Environmental Laws, conduct any investigation, study, sampling and testing, and undertake any cleanup, removal, remedial or other action necessary to remove and clean up all Hazardous Materials at, on, under or emanating from any affected property, in accordance with the requirements of all Environmental Laws.

SECTION 5.15. Annual Lender Meeting. The Borrower shall host a meeting (which may be in the form of a conference call) with representatives of the Administrative Agent and the Lenders once during each fiscal year of the Borrower, in each case, following delivery of the financial statements delivered pursuant to Section 5.01(a) and upon reasonable prior notice to be held at such time as reasonably designated by the Borrower (in consultation with the Administrative Agent), at which meeting shall be discussed the financial results of the Borrower and the Subsidiaries.

SECTION 5.16. Post-Closing Covenants. The Borrower agrees to deliver, or cause to be delivered, to the Administrative Agent, the items described on Schedule 5.16 on the Effective Date by the times specified with respect to such items, or such later time as may be agreed to by the Administrative Agent in its sole discretion.

Until the Commitments have expired or been terminated and the principal of and interest on each Loan and all fees, expenses and other amounts payable under any Loan Document have been paid in full, each of the Borrower and the Subsidiaries covenant and agree with the Lenders that:

SECTION 6.01. Indebtedness.

(a) the Borrower will not, nor will it permit any Subsidiary to, directly or indirectly create, incur, issue, guarantee or assume or otherwise become directly or indirectly liable for any Indebtedness, contingently or otherwise, except:

(i) Indebtedness created under the Loan Documents;

(ii) Indebtedness consisting of earn-outs, milestones and other similar deferred purchase price obligations;

(iii) Indebtedness existing on the Effective Date and set forth in Schedule 6.01(iii) and Permitted Refinancings thereof;

(iv) Indebtedness of the Borrower owed to any Subsidiary Loan Party and of any Subsidiary Loan Party owed to the Borrower or any other Subsidiary Loan Party;

(v) Guarantees by the Borrower of Indebtedness of any Subsidiary Loan Party and of any Subsidiary Loan Party of Indebtedness of the Borrower or any other Subsidiary Loan Party, provided that the Indebtedness so Guaranteed is permitted by this Section 6.01;

(vi) (A) Indebtedness of the Borrower or any Subsidiary incurred to finance the acquisition, construction or improvement of any fixed or capital assets, including Capital Lease Obligations, and any Indebtedness assumed by the Borrower or any Subsidiary in connection with the acquisition of any such assets or secured by a Lien on any such assets prior to the acquisition thereof; provided that (i) such Indebtedness is incurred prior to or within 270 days after such acquisition or the completion of such construction or improvement and (ii) the aggregate principal amount of Indebtedness permitted by clauses (A) and (B) of this clause (vi) shall not exceed $15,000,000 outstanding at any time; and (B) Permitted Refinancings thereof;

(vii) (A) Indebtedness of any Person that becomes a Subsidiary after the date hereof; provided, that such Indebtedness exists at the time such Person becomes a Subsidiary and is not created in contemplation of or in connection with such Person becoming a Subsidiary and (B) Permitted Refinancings thereof; provided further, that the aggregate amount of Indebtedness under this Section 6.01(a)(vii), shall not exceed $2,500,000;

(viii) Indebtedness owed to any Person (including obligations in respect of letters of credit for the benefit of such Person) providing workers' compensation, health, disability or other employee benefits or property, casualty or liability insurance pursuant to reimbursement or indemnification obligations to such Person, in each case incurred in the ordinary course of business;

(ix) Indebtedness of the Borrower or any Subsidiary in respect of performance bonds, bid bonds, appeal bonds, surety bonds, performance and completion guarantees and similar obligations, in each case provided in the ordinary course of business;

(x) Indebtedness of any Loan Party pursuant to Swap Agreements permitted by Section 6.14;

(xi) [reserved];

(xii) Indebtedness representing deferred compensation to employees of the Borrower and the Subsidiaries incurred in the ordinary course of business;

(xiii) (A) Indebtedness of the Borrower or any Subsidiary Loan Party owed to any non-Loan Party Subsidiary existing on the Effective Date and set forth in Schedule 6.01(xiii), (B) Indebtedness of any non-Loan Party Subsidiary owed to the Borrower or any Subsidiary Loan Party, provided, that the aggregate amount of Indebtedness under this Section 6.01(a)(xiii)(B), when taken together with Investments made under Section 6.04(a)(xvii)(C), shall not exceed $10,000,000 and (C) Indebtedness of the Borrower or any Subsidiary Loan Party owed to any non-Loan Party Subsidiary, provided, any such Indebtedness shall be unsecured and subordinated in right of payment to the payment in full of the Obligations pursuant to subordination terms reasonably satisfactory to the Administrative Agent;

(xiv) Indebtedness of the Borrower or a Subsidiary consisting of the financing of insurance premiums;

(xv) Indebtedness of the Borrower or a Subsidiary in connection with cash management services (including netting services, automatic clearinghouse arrangements, overdraft protections, employee credit card programs and related or similar services or activities);

(xvi) [reserved];

(xvii) the incurrence of Indebtedness resulting from endorsements of negotiable instruments for collection in the ordinary course of business;

(xviii) additional Indebtedness in an aggregate principal amount not to exceed $5,000,000 at any time outstanding; and

(xix) the incurrence of Indebtedness arising from agreements of the Borrower or a Subsidiary providing for indemnification, adjustment of purchase price, holdback, contingency payment obligations or similar obligations, in each case, incurred or assumed in connection with the disposition or acquisition of any business, assets or capital stock of the Borrower or any Subsidiary.

(b) For purposes of determining compliance with Section 6.01(a), in the event that an item of Indebtedness (or any portion thereof) at any time, whether at the time of incurrence or upon the application of all or a portion of the proceeds thereof or subsequently, meets the criteria of more than one of the categories of permitted Indebtedness described in Section 6.01(a)(i) through (xix) above, the Borrower, in its sole discretion, will classify and may subsequently reclassify such item of Indebtedness (or any portion thereof) in any one or more of the types of Indebtedness described in Section 6.01(a)(i) through (xix) above and will only be required to include the amount and type of such Indebtedness in such of the above clauses as determined by the Borrower at such time. The Borrower will be entitled to divide and classify an item of Indebtedness in more than one of the types of Indebtedness described in Section 6.01(a)(i) through (xix) above.

SECTION 6.02. Liens. (a) The Borrower will not, nor will it permit any Subsidiary to, create, incur, assume or permit to exist any Lien on any property or asset now owned or hereafter acquired by it, or assign or sell any income or revenues (including accounts receivable) or rights in respect of any thereof, except:

(i) Liens created by the Loan Documents;

(ii) Permitted Encumbrances;

(iii) any Lien on any property or asset of the Borrower or any Subsidiary existing on the Effective Date and set forth in Schedule 6.02; provided that (A) such Lien shall not apply to any other property or asset of the Borrower or any Subsidiary (other than improvements, accessions, proceeds, dividends or distributions in respect thereof and assets fixed or appurtenant thereto) and (B) such Lien shall secure only those obligations which it secures on the Effective Date and Permitted Refinancings thereof;

(iv) any Lien existing on any property or asset prior to the acquisition thereof by the Borrower or any Subsidiary or existing on any property or asset or Equity Interests of any Person that becomes a Subsidiary after the date hereof prior to the time such Person becomes a Subsidiary; provided that (A) such Lien secures Indebtedness permitted by Section 6.01(a)(vii) and such Lien is not created in contemplation of or in connection with such acquisition or such Person becoming a Subsidiary, as applicable, (B) such Lien shall not apply to any other property or asset of the Borrower or any Subsidiary and (C) such Lien shall secure only those obligations that it secures on the date of such acquisition or the date such Person becomes a Subsidiary, as applicable, and any Permitted Refinancings thereof;

(v) Liens on fixed or capital assets acquired, constructed or improved by the Borrower or any Subsidiary, provided that (A) such security interests secure Indebtedness permitted by Sections 6.01(a)(vi), (B) such security interests and the Indebtedness secured thereby are incurred prior to or within 270 days after such acquisition or the completion of such construction or improvement and (C) such security interests shall not apply to any other property or assets of the Borrower or any Subsidiary (other than improvements, accessions, proceeds, dividends or distributions in respect thereof and assets fixed or appurtenant thereto);

(vi) Liens of a collecting bank arising in the ordinary course of business under Section 4-208 of the Uniform Commercial Code in effect in the relevant jurisdiction covering only the items being collected upon;

(vii) Liens arising out of sale and leaseback transactions permitted by Section 6.06;

(viii) Liens granted by a Subsidiary that is not a Loan Party in favor of the Borrower or another Loan Party in respect of Indebtedness owed by such Subsidiary;

(ix) licenses or sublicenses, leases or subleases, granted to others not interfering in any material respect with the business of the Borrower or any Subsidiary;

(x) Liens encumbering reasonable customary initial deposits and margin deposits and similar Liens attaching to commodity trading accounts or other brokerage accounts incurred in the ordinary course of business and not for speculative purposes;

(xi) Liens that are contract rights of set-off (i) relating to the establishment of depositary relations with banks not given in connection with the issuance of Indebtedness, (ii) relating to pooled deposit or sweep accounts of the Borrower or any Subsidiary to permit satisfaction of overdraft or similar obligations incurred in the ordinary course of business of the Borrower and the Subsidiaries or (iii) relating to purchase orders and other agreements entered into with customers of the Borrower or any Subsidiary in the ordinary course of business;

(xii) Liens solely on any cash earned money deposits made by the Borrower or any Subsidiary in connection with any letter of intent or purchase agreement permitted hereunder;

(xiii) Liens in favor of a Loan Party securing Indebtedness permitted under Sections 6.01(a)(iv) and (v);

(xiv) Liens on insurance proceeds in favor of insurance companies granted solely to secured financed insurance premiums;

(xv) Liens on assets of the Borrower or the Subsidiaries not otherwise permitted by this Section 6.02, so long as the aggregate outstanding principal amount of the obligations secured thereby does not exceed $5,000,000;

(xvi) Liens securing Indebtedness permitted under Section 6.01(a)(xiii);

(xvii) Liens on Equity Interests of any joint venture (a) securing obligations of such joint venture or (b) pursuant to the relevant joint venture agreement or arrangement;

(xviii) Liens in favor of a seller solely on any cash earnest money deposits made by the Borrower or any of its Subsidiaries in connection with any letter of intent or purchase agreement with respect to any Permitted Acquisition or other Investment permitted hereunder; and

(xix) Liens arising out of conditional sale, title retention, consignment or similar arrangements for the sale of goods entered into by the Borrower or any of its Subsidiaries in the ordinary course of business.

(b) For purposes of determining compliance with Section 6.02(a), in the event that a Lien (or any portion thereof) at any time, whether at the time of incurrence or upon the application of all or a portion of the proceeds thereof or subsequently, meets the criteria of more than one of the categories of permitted Liens described in Section 6.02(a)(i) through (xix) above, the Borrower, in its sole discretion, will classify and may subsequently reclassify such Lien (or any portion thereof) in any one or more of the types of Liens described in Section 6.02(a)(i) through (xix) above and will only be required to include the amount and type of such Lien in such of the above clauses as determined by the Borrower at such time. The Borrower will be entitled to divide and classify a Lien in more than one of the types of Liens described in Section 6.02(a)(i) through (xix) above.

SECTION 6.03. Fundamental Changes; Line of Business.

(a) The Borrower will not, nor will it permit any Subsidiary to, merge into or consolidate with, or transfer substantially all of its assets to, any other Person, or permit any other Person

to merge into or consolidate with it, or liquidate or dissolve, except that if at the time thereof and immediately after giving effect thereto no Default shall have occurred and be continuing, (i) any wholly-owned Subsidiary may merge into the Borrower in a transaction in which the surviving entity is the Borrower, (ii) any Subsidiary may merge with any one or more other Subsidiaries (in each case, other than the Borrower) provided that (x) when any wholly-owned Subsidiary is merging with another Subsidiary, a wholly-owned Subsidiary shall be the continuing or surviving Person and (y) if any party to such merger is a Subsidiary Loan Party, the continuing or surviving Person is or becomes a Subsidiary Loan Party concurrently with such merger, (iii) any Subsidiary (other than a Subsidiary Loan Party) may liquidate or dissolve if the Borrower determines in good faith that such liquidation or dissolution is in the best interests of the Borrower and is not materially disadvantageous to the Lenders and (iv) any asset sale permitted by Section 6.05(g) may be effected through the merger of a subsidiary of the Borrower with a third party; provided that any such merger referred to in clauses (ii), (iii) or (iv) above involving a Person that is not a wholly-owned Subsidiary immediately prior to such merger shall not be permitted unless also permitted by Section 6.04.

(b) The Borrower will not, and will not permit any Subsidiary to, engage to any material extent in any business other than a Permitted Business.

SECTION 6.04. Investments, Loans, Advances, Guarantees and Acquisitions. (a) The Borrower will not, nor will it permit any Subsidiary to, purchase or acquire (including pursuant to any merger with any Person that was not a wholly owned Subsidiary prior to such merger) any Investments, except:

(i) Permitted Acquisitions;

(ii) Permitted Investments;

(iii) Investments existing on the Effective Date and set forth on Schedule 6.04(iii) and any modification, replacement, renewal, reinvestment or extension thereof;

(iv) Investments (including cash payments in respect of earn-outs, milestones and other similar deferred purchase price obligations) in an aggregate amount not to exceed, when taken together with the aggregate amount of payments made pursuant to Section 6.08(b)(iii), $5,000,000 per fiscal year of the Borrower and $25,000,000 during the term of this Agreement; provided that (x) before and immediately after giving effect to any such Investment, no Specified Event of Default has occurred and is continuing or would result therefrom and (y) pro forma Liquidity after giving effect thereto shall exceed $50,000,000;

(v) loans or advances made by the Borrower to any Subsidiary Loan Party and made by any Subsidiary Loan Party to the Borrower or any Subsidiary Loan Party, provided that any such loans and advances made by a Loan Party shall be evidenced by a promissory note pledged pursuant to the Collateral Agreement; provided, however, that the foregoing pledge requirement with respect to any intercompany indebtedness may be satisfied by delivery of an omnibus or global intercompany note executed by all Loan Parties as payees and all such obligors as payors;

(vi) Guarantees constituting Indebtedness permitted by Section 6.01;

(vii) receivables or other trade payables owing to the Borrower or any Subsidiary if created or acquired in the ordinary course of business consistent with past practice and payable or dischargeable in accordance with customary trade terms, provided that such trade terms may include such concessionary trade terms as the Borrower or any such Subsidiary deems reasonable under the circumstances;

(viii) Investments consisting of Equity Interests, obligations, securities or other property received in settlement of delinquent accounts of and disputes with customers and suppliers in the ordinary course of business and owing to the Borrower or any Subsidiary or in satisfaction of judgments;

(ix) Investments by the Borrower or any Subsidiary in payroll, travel and similar advances to cover matters that are expected at the time of such advances ultimately to be treated as expenses for accounting purposes and that are made in the ordinary course of business;

(x) loans or advances by the Borrower or any Subsidiary to employees (A) made for reasonable and customary business-related travel, entertainment, relocation and other ordinary business purposes and (B) otherwise not exceeding $5,000,000 in the aggregate at any time outstanding (determined without regard to any write-downs or write-offs of such loans or advances);

(xi) Investments in the form of Swap Agreements permitted by Section 6.14;

(xii) Investments of any Person existing at the time such Person becomes a Subsidiary of the Borrower or consolidates or merges with the Borrower or any of the Subsidiaries (including in connection with a Permitted Acquisition) so long as such investments were not made in contemplation of such Person becoming a Subsidiary or of such consolidation or merger;

(xiii) Investments received in connection with the dispositions of assets permitted by Section 6.05;

(xiv) Investments constituting deposits described in clauses (c) and (d) of the definition of the term "Permitted Encumbrances";

(xv) other Investments (including in respect of earn-outs, milestones and other similar deferred purchase price obligations) in an aggregate amount not to exceed the Available Basket Amount; provided that (x) before and immediately after giving effect to any such Investment, no Specified Event of Default has occurred and is continuing or would result therefrom and (y) pro forma Liquidity after giving effect thereto shall exceed $100,000,000;

(xvi) ~~Guarantees by~~ the Borrower or any Subsidiary ~~of leases (other than Capital Lease Obligations) or of other obligations that do not constitute Indebtedness, in each case entered into in the ordinary course of business~~;

(xvii) (A) Investments from Loan Parties to non-Loan Party Subsidiaries existing on the Effective Date and set forth on Schedule 6.04(xvii) and any modification, replacement, renewal, reinvestment or extension thereof~~; (B) Investments from non-Loan Party Subsidiaries to Loan Parties and (C)~~ Investments from Loan Parties to non-Loan Party Subsidiaries; provided that the aggregate amount of Investments under this Section 6.04(a)(xvii)(C), when taken together with any Indebtedness under Section 6.01(a)(xiii)(B), shall not exceed $10,000,000;

(xviii) other Investments in respect of earn-outs, milestones and other similar deferred purchase price obligations in an aggregate amount not to exceed $4,000,000 in any fiscal year; provided that before and immediately after giving effect to any such Investment, no Specified Event of Default has occurred and is continuing or would result therefrom;

(xix) the licensing of intellectual property on arms'-length terms pursuant to joint marketing or joint venture arrangements with other Persons in the ordinary course of business which do not materially interfere with the business of the Borrower and the Subsidiaries; and

(xx) Investments in the form of prepayments of expenses, so long as such expenses were incurred in the ordinary course of business and are paid in accordance with customary trade terms of the Borrower or any of its Subsidiaries.

(b) For purposes of determining compliance with Section 6.04, in the event that an Investment (or any portion thereof) at any time meets the criteria of more than one of the categories of permitted Investments described in Section 6.04(a)(i) through (xx) above, the Borrower, in its sole discretion, will classify and may subsequently reclassify such Investment (or any portion thereof) in any one or more of the types of Investments described in Section 6.04(a)(i) through (xx) above and will only be required to include the amount and type of such Investment in such of the above clauses as determined by the Borrower at such time. The Borrower will be entitled to divide and classify an Investment in more than one of the types of Investments described in Section 6.04(a)(i) through (xx) above. For purposes of covenant compliance, the amount of any Investment shall be the amount actually invested, less any return of capital, without adjustment for subsequent increases or decreases in the value of such Investment.

SECTION 6.05. Asset Sales. The Borrower will not, nor will it permit any Subsidiary to, sell, transfer, lease or otherwise dispose of any asset, including any Equity Interest owned by it, nor will the Borrower permit any Subsidiary to issue any additional Equity Interest in such Subsidiary (other than to the Borrower or another Subsidiary in compliance with Section 6.04) (each, a "Disposition" or "Dispose"), except:

(a) Dispositions of (i) inventory in the ordinary course of business, (ii) used, obsolete, worn out or surplus equipment or property in the ordinary course of business; and (iii) property no longer used or useful, or economically practicable or commercially desirable to maintain, in the conduct of the business of the Borrower and any Subsidiary (including by ceasing to enforce or allowing the lapse, abandonment or invalidation of or discontinuing the use or maintenance of or putting into the public domain any intellectual property that is, in the reasonable judgment of the Borrower, no longer used or useful, or economically practicable or commercially desirable to maintain, or in respect of which the Borrower determines in its reasonable business judgment that such action or inaction is desirable, in each case pursuant to this clause (iii), which has a Fair Market Value, individually or in the aggregate, in an amount not to exceed $5,000,000 for the period of four consecutive fiscal quarters of the Borrower most recently ended for which financial statements have been delivered (calculated at the time of such Disposition));

(b) Dispositions to the Borrower or any Subsidiary, provided that any such sales, transfers or dispositions from a Loan Party to a Subsidiary that is not a Loan Party or from the Borrower or a Subsidiary shall constitute Investments subject to Section 6.04;

(c) Dispositions of accounts receivable in connection with the compromise, settlement or collection thereof consistent with past practice;

(d) to the extent constituting Dispositions, transactions permitted by Sections 6.02, 6.03, 6.04, 6.06 and 6.08;

(e) Dispositions of Investments in joint ventures to the extent required by, or made pursuant to customary buy/sell arrangements between, the joint venture parties set forth in joint venture arrangements and similar binding arrangements;

(f) Dispositions resulting from any casualty or other insured damage to, or any taking under power of eminent domain or by condemnation or similar proceeding of, any property or asset of the Borrower or any Subsidiary;

(g) Dispositions of assets that are not permitted by any other paragraph of this Section 6.05, provided that the aggregate Fair Market Value represented by such assets during any period of four consecutive fiscal quarters is not greater than $10,000,000 for the period of four consecutive fiscal quarters of the Borrower most recently ended for which financial statements have been delivered (calculated at the time of such Disposition);

(h) exchanges of property for similar replacement property for fair value;

(i) [reserved];

(j) [reserved];

(k) the sale or other Disposition of Permitted Investments;

(l) to the extent allowable under Section 1031 of the Code (or comparable or successor provision), any exchange of like property (excluding any boot thereon permitted by such provision) for use in any business conducted by the Borrower or any of the Subsidiaries that is not in contravention of Section 6.03(b);

(m) [reserved];

(n) the non-exclusive licensing or sublicensing of intellectual property in the ordinary course of business or in accordance with industry practice;

(o) the unwinding of Swap Agreements permitted by Section 6.14; and

(p) the compromise, settlement, release or surrender of a contract, tort or other litigation claim, arbitration or other disputes.

provided that all sales, transfers, leases and other dispositions permitted by clause (g) above shall be made for Fair Market Value and for at least 75% cash consideration (it being understood that the following shall constitute cash consideration: real estate, equipment or other operating assets used or useful in a Permitted Business received by the Borrower or the Subsidiaries as consideration (excluding stock, notes or other securities)) and after giving effect to such sales, transfers, leases and other dispositions permitted hereby the Borrower shall be in compliance with the Financial Performance Covenants on a pro forma basis.

SECTION 6.06. Sale and Leaseback Transactions. The Borrower will not, nor will it permit any Subsidiary to, enter into any arrangement, directly or indirectly, whereby it shall sell or transfer any property, real or personal, used or useful in the business of the Borrower or its Subsidiaries, whether now owned or hereafter acquired, and thereafter enter into any agreement (either directly or through any other Subsidiary) to rent or lease such property or other property that it intends to use for substantially the same purpose or purposes as the property sold or transferred, except for sale and leaseback transactions approved by the Required Lenders in their sole discretion.

SECTION 6.07. [Reserved].

SECTION 6.08. Restricted Payments; Certain Payments of Indebtedness.

(a) The Borrower will not, nor will it permit any Subsidiary to, declare or make, any Restricted Payment, except:

(i) the Borrower may declare and pay dividends with respect to its common stock payable solely in additional shares of its common stock, and, with respect to its preferred stock, payable solely in additional shares of such preferred stock or in shares of its common stock;

(ii) Subsidiaries may declare and pay distributions ratably with respect to their capital stock, membership or partnership interests or other similar Equity Interests;

(iii) [reserved];

(iv) the Borrower and the Subsidiaries may (A) purchase or pay cash in lieu of fractional shares of its Equity Interests arising out of stock dividends, splits, or business combinations or in connection with issuance of Qualified Equity Interests of the Borrower pursuant to mergers, consolidations or other acquisitions permitted by this Agreement, (B) pay cash in lieu of fractional shares upon the exercise of warrants, options or other securities convertible into or exercisable for Qualified Equity Interests of the Borrower, and (C) make payments in connection with the retention of Qualified Equity Interests in payment of withholding Taxes in connection with equity-based compensation plans to the extent that net share settlement arrangements are deemed to be repurchases;

(v) the Borrower may make Restricted Payments to the direct or indirect equity holders of the Borrower to the extent tax liabilities are attributable to the ownership or operations of the Borrower, its direct or indirect Subsidiaries and any Subsidiary, provided that (A) the amount of such Restricted Payments shall not exceed the tax liabilities that the Borrower and the direct or indirect Subsidiaries would be required to pay in respect of Federal, state and local taxes were the Borrower and the direct or indirect Subsidiaries to pay such Taxes as stand-alone taxpayers less any tax payable directly by the Borrower or any direct or indirect Subsidiary and (B) all Restricted Payments made to the direct or indirect equity holders of the Borrower pursuant to this clause (v) are used by such Person solely for the purposes specified herein;

(vi) the Borrower may make Restricted Payments in the form of cash payments in respect of its preferred Equity Interests and other dividends, distributions and repurchases in respect of its Equity Interests in an aggregate amount not to exceed (x) $6,000,000 in any fiscal year of the Borrower in respect of dividends on preferred Equity Interests and (y) $1,000,000 in any fiscal year of the Borrower in respect of stock repurchases and other Restricted Payments; provided that before and immediately after giving effect to such Restricted Payment, no Specified Event of Default has occurred and is continuing or would result therefrom;

(vii) the Borrower and the Subsidiaries may make additional Restricted Payments in an aggregate amount not exceeding $5,000,000 throughout the term of this Agreement; provided that, immediately after giving effect to such Restricted Payment no Default or Event of Default has occurred and is continuing; and

(viii) the Borrower may purchase, redeem, retire or otherwise acquire for value of Equity Interests (and any related stock appreciation rights, plans, equity incentive or achievement plans or any similar plans) in a person being acquired in any Permitted Acquisition in connection with such Permitted Acquisition.

(b) The Borrower will not nor will it permit any Subsidiary to, make, directly or indirectly, any payment or other distribution (whether in cash, securities or other property) of or in respect of principal of or interest on, or any payment or other distribution (whether in cash, securities or other property), including any sinking fund or similar deposit, on account of the purchase, redemption, retirement, acquisition, cancellation or termination of, any Subordinated Indebtedness (other than intercompany loans among Subsidiary Loan Parties and the Borrower), except:

(i) payment of regularly scheduled interest and principal payments as and when due in respect of such Indebtedness, other than as prohibited by any subordination provisions thereof;

(ii) prepayments in respect of the Google Note, earn-outs, milestone and other similar deferred purchase price obligations in an aggregate amount not to exceed the Available Basket Amount; provided that (x) before and immediately after giving effect to any such prepayment, no Specified Event of Default has occurred and is continuing or would result therefrom and (y) pro forma Liquidity after giving effect thereto shall exceed $100,000,000;

(iii) the cash payments in respect of any earn-out, milestone and other similar deferred purchase price obligations in an aggregate amount not to exceed, when taken together with the aggregate amount of Investments made pursuant to Section 6.04(a)(iv), $5,000,000 per fiscal year and $25,000,000 during the term of this Agreement; provided that (x) before and immediately after giving effect to any such Investment, no Specified Event of Default has occurred and is continuing or would result therefrom and (y) pro forma Liquidity after giving effect thereto shall exceed $50,000,000;

(iv) the refinancing thereof with any Indebtedness (to the extent such Indebtedness constitutes a Permitted Refinancing); and

(v) the conversion or exchange of any such Indebtedness into, or redemption, repurchase, prepayment, defeasance or other retirement of any such Indebtedness with, Borrower's Equity Interests.

SECTION 6.09. Transactions with Affiliates. The Borrower will not, nor will it permit any Subsidiary to, sell, lease or otherwise transfer any property or assets to, or purchase, lease or otherwise acquire any property or assets from, or otherwise engage in any other transactions with, any of its Affiliates, involving aggregate payments or consideration in excess of $2,500,000 for any individual transaction or series of related transactions, except:

(a) transactions that are at prices and on terms and conditions not less favorable to the Borrower or such Subsidiary than could be obtained on an arm's-length basis from unrelated third parties,

(b) (i) transactions between or among the Borrower and the Subsidiary Loan Parties, (ii) transactions between or among Subsidiaries that are not Subsidiary Loan Parties and (iii) transactions between or among the Borrower and the Subsidiary consistent with past practice and made in the ordinary course,

(c) any transaction permitted under Sections 6.01, 6.02, 6.03, 6.04, 6.05 or 6.08,

(d) [reserved],

(e) [reserved],

(f) [reserved],

(g) [reserved],

(h) any lease or sublease entered into between the Borrower or any Subsidiary, as lessee or sublessee, and any of the Affiliates (as of the Effective Date) of the Borrower or entity controlled by such Affiliates, as lessor or sublessor, which is approved in good faith by a majority of the disinterested members of the Board of Directors of the Borrower,

(i) payments to or from, and transactions with, any joint venture in the ordinary course of business (including any cash management activities related thereto),

(j) [reserved],

(k) the payment of reasonable fees to directors of the Borrower or any Subsidiary who are not employees of the Borrower or any Subsidiary, and compensation and employee benefit arrangements paid to, and indemnities provided for the benefit of, directors, officers or employees of the Borrower or any Subsidiary in the ordinary course of business,

(l) any issuances of securities or other payments, awards or grants in cash, securities or otherwise pursuant to, or the funding of, employment agreements, stock options and stock ownership plans approved by the Borrower's Board of Directors,

(m) transactions pursuant to agreements existing on the Effective Date and set forth on Schedule 6.09 and any amendments thereto to the extent such amendments are not materially less favorable to the Borrower or such Subsidiary Loan Party than those provided for in the original agreements,

(n) employment and severance arrangements entered into in the ordinary course of business and approved by the Borrower's Board of Directors between the Borrower or any Subsidiary and any employee thereof,

(o) all payments made or to be made in connection with the Transactions, including the payment of the Transaction Costs,

(p) [reserved];

(q) [reserved]; and

(r) any customary management services agreements or similar agreements between the Borrower or any Subsidiary.

SECTION 6.10. Restrictive Agreements.

(a) Subject to clauses (b) and (c) below, the Borrower will not, nor will it permit any Subsidiary to, directly or indirectly, enter into, incur or permit to exist any agreement or other arrangement that prohibits, restricts or imposes any condition upon (i) the ability of the Borrower or any Subsidiary to create, incur or permit to exist any Lien upon any of its property or assets or (ii) the ability of any Subsidiary to pay dividends or other distributions with respect to any shares of its capital stock or to make or repay loans or advances to the Borrower or any Subsidiary or to Guarantee Indebtedness of the Borrower or any other Subsidiary.

(b) Section 6.10(a) shall not apply to restrictions and conditions (i) imposed by law or by any Loan Document, (ii) existing on the Effective Date and identified on Schedule 6.10 (but shall apply to any extension or renewal of, or any amendment or modification expanding the scope of, any such restriction or condition unless such amendment is not otherwise prohibited by Section 6.11), (iii) contained in agreements relating to the sale of a Subsidiary pending such sale, provided such restrictions and conditions apply only to the Subsidiary that is to be sold and such sale is permitted hereunder, (iv) imposed by any customary provisions restricting assignment of any agreement entered into the ordinary course of business, (v) imposed by any instrument or agreement governing Indebtedness of a Subsidiary acquired by the Borrower or any of the Subsidiaries as in effect at the time of such acquisition (except to the extent such Indebtedness was incurred in connection with or in contemplation of such acquisition), which encumbrance or restriction is not applicable to any Person, or the properties or assets of any such Person, other than the Person or any of its Subsidiaries, so acquired (provided that such Indebtedness was permitted by Section 6.01 to be incurred), (vi) imposed by any instrument or agreement governing Indebtedness of the Borrower or any Subsidiary that is incurred or issued subsequent to the Effective Date and is permitted pursuant to Section 6.01 (provided that the restrictions in such Indebtedness are not materially more restrictive in the aggregate than the restrictions contained in this Agreement), or (vii) customary provisions in shareholders agreements, joint venture agreements, organization constitutive documents or similar binding agreements relating to any joint venture or non-wholly-owned Subsidiary and other similar agreements applicable to joint ventures and non-wholly-owned Subsidiaries and applicable solely to such joint venture or non-wholly-owned Subsidiary and the Equity Interests issued thereby.

(c) Section 6.10(a)(i) shall not apply to restrictions or conditions imposed by customary provisions in leases restricting the assignment thereof.

SECTION 6.11. Amendment of Material Documents. The Borrower will not, nor will it permit any Subsidiary to, amend, modify or waive any of its rights under (a) any documentation governing any Subordinated Indebtedness (other than on terms that would be permitted in a Permitted Refinancing thereof or as permitted in accordance with any intercreditor agreement), (b) the Google Note (in an manner that would be adverse in any material respect to the interests of the Lenders (including, without limitation, modifications or amendments that advance the maturity date thereof to a date sooner that 135 days after the Term Loan Maturity Date)) or (c) its certificate of incorporation, by-laws or other organizational documents (to the extent such amendment, modification or waiver would be materially adverse to the Lenders).

SECTION 6.12. Financial Performance Covenants.

(a) Minimum Liquidity. As of the last day of each month, commencing with the month ending December 31, 2022, the Borrower shall not permit Liquidity, calculated as the average daily balance for the month then ended, to be less than $25,000,000 (the "Minimum Liquidity Amount").

(b) Minimum Revenue. As of the last day of each fiscal quarter, commencing with the fiscal quarter ending December 31, 2022, the Borrower shall not permit consolidated Revenues of the Borrower and its Subsidiaries for the trailing twelve month period ending on the last day of such fiscal quarter to be less than the amount set forth below of each applicable period:

Fiscal Quarter End	Minimum Consolidated Revenues	
December 31, 2022	$	226,500,000.00
March 31, 2023	$	253,100,000.00
June 30, 2023	$	283,500,000.00

Fiscal Quarter End	Minimum Consolidated Revenues
September 30, 2023	$ 312,900,000.00
December 31, 2023	$ 342,700,000.00
March 31, 2024	$ 371,600,000.00
June 30, 2024	$ 408,300,000.00
September 30, 2024	$ 443,000,000.00
December 31, 2024	$ 459,100,000.00
March 31, 2025	$ 487,900,000.00
June 30, 2025	$ 521,900,000.00
September 30, 2025	$ 556,700,000.00
December 31, 2025 and each fiscal quarter thereafter	$ 594,100,000.00

SECTION 6.13. Accounting; Fiscal Year. The Borrower will not, and will not permit any of its Subsidiaries to, make any significant change in accounting treatment or reporting practices, except as permitted by GAAP, and will not change its fiscal year-end to a date other than December 31.

SECTION 6.14. Swap Agreements. The Borrower will not, and will not permit any of its Subsidiaries to, enter into any Swap Agreement, except (a) Swap Agreements entered into to hedge or mitigate risks to which the Borrower or such Subsidiary has actual exposure (other than those in respect of Equity Interests) and (b) Swap Agreements entered into in order to effectively cap, collar or exchange interest rates (from fixed to floating rates, from one floating rate to another floating rate or otherwise) with respect to any interest-bearing liability or investment of the Borrower or such Subsidiary, in each case, for bona fide hedging purposes and not for speculation.

SECTION 6.15. Changes in Name. The Borrower shall not, and shall not permit any of its Subsidiaries to, change its legal name except as permitted by Section 5.03(a).

SECTION 6.16. OFAC; Patriot Act. The Borrower shall not, and shall not permit any of its Subsidiaries to, fail to comply with the laws, regulations and executive orders referred to in Section 3.17.

SECTION 6.17. Issuance or Repurchase of Equity Interests. The Borrower shall not, and shall not permit any of its Subsidiaries to, issue any Disqualified Equity Interests.

SECTION 6.18. Capital Expenditures. The Borrower will not, and will not permit any of its Subsidiaries to, make Capital Expenditures in any fiscal year in an aggregate amount exceeding (i) $25,000,000 plus (ii) an additional amount with the prior written consent of the Administrative Agent (such consent not to be unreasonably withheld, conditioned or delayed) plus (iii) 50% of the Available Basket Amount; provided that any Capital Expenditure made in reliance on the foregoing clause (ii) shall be subject to the following conditions: (x) before and immediately after giving effect to any such Capital Expenditure, no Specified Event of Default has occurred and is continuing or would result therefrom and (y) pro forma Liquidity after giving effect thereto shall exceed $100,000,000; provided further that, any unused amount under the foregoing clause (i) of this Section 6.18 shall carry forward to the immediately following fiscal year (such amount, the "Capital Expenditure Carryover Amount"); provided, further, that any Capital Expenditures made in a particular fiscal year of the Borrower shall first be deemed to have been made with the portion of the Capital Expenditures permitted for such fiscal year before the Capital Expenditure Carryover Amount is applied to such fiscal year.

ARTICLE VII

Events of Default

SECTION 7.01. Events of Default. If any of the following events (any such event, an "Event of Default") shall occur:

(a) the Borrower shall fail to pay any principal of any Loan when and as the same shall become due and payable, whether at the due date thereof or at a date fixed for prepayment thereof or otherwise;

(b) the Borrower shall fail to pay any interest on any Loan or any fee (including any Make Whole/Prepayment Fee Amount) or any other amount (other than an amount referred to in Section 7.01(a)) payable under this Agreement or any other Loan Document, when and as the same shall become due and payable, and such failure shall continue unremedied for a period of five Business Days;

(c) any representation or warranty made or deemed made by or on behalf of the Borrower or any Subsidiary in or in connection with any Loan Document or any amendment or modification thereof or waiver thereunder, or in any report, certificate, financial statement or other document furnished pursuant to or in connection with any Loan Document or any amendment or modification thereof or waiver thereunder, shall prove to have been incorrect in any material respect (except to the extent any such representation or warranty is qualified by "materially", "Material Adverse Effect" or a similar term, in which case such representation or warranty shall prove to have been incorrect in any respect) when made or deemed made;

(d) the Borrower shall fail to observe or perform any covenant, condition or agreement contained in Section 5.02(a), 5.04 (with respect to the existence of the Borrower) or in Article VI (it being understood and agreed that any breach of Section 6.12(b) is subject to cure as provided in Section 7.02);

(e) the Borrower shall fail to observe or perform any covenant, condition or agreement contained in Section 5.01(a), (b), (c) or (d) and such failure shall continue unremedied for a period of 10 days;

(f) the Borrower or any Subsidiary Loan Party shall fail to observe or perform any covenant, condition or agreement contained in any Loan Document (other than those specified in Sections 7.01(a), (b), (d) or (e)), and such failure shall continue unremedied for a period of 30 days after notice thereof from the Administrative Agent to the Borrower (which notice will be given at the request of any Lender);

(g) the Borrower or any Subsidiary shall fail to make any payment (whether of principal or interest and regardless of amount) in respect of any Material Indebtedness, when and as the same shall become due and payable (after giving effect to any applicable grace period); provided that this paragraph (g) shall not apply to any Indebtedness if the sole remedy of the holder thereof in the event of such non-payment is to elect to convert such Indebtedness into Qualified Equity Interests (and cash in lieu of fractional shares); provided further that this paragraph (g) shall not apply to any such failure that (x) is remedied by the Borrower or any applicable Subsidiary or (y) waived (including in the form of amendment) by the requisite holders of the applicable item of Material Indebtedness in either case, prior to acceleration of all the Loans pursuant to this Section 7.01;

(h) any event or condition (other than, with respect to Indebtedness consisting of Swap Agreements, termination events or equivalent events pursuant to the terms of such Swap Agreements and not as a result of any default thereunder by any Loan Party) occurs that results in any Material Indebtedness becoming due prior to its scheduled maturity or that enables or permits (with all applicable grace periods having expired and all required notices have been given) the holder or holders of any Material Indebtedness or any trustee or agent on its or their behalf to cause any Material Indebtedness to become due, or to require the prepayment, repurchase, redemption or defeasance thereof, prior to its scheduled maturity, provided that this clause (h) shall not apply to (i) secured Indebtedness that becomes due as a result of the voluntary sale or transfer of the property or assets (to the extent not prohibited under this Agreement) securing such Indebtedness; (ii) termination events or similar events occurring under any Swap Agreement that constitutes Material Indebtedness (it being understood that paragraph (g) of this Section 7.01 will apply to any failure to make any payment required as a result of any such termination or similar event) or (iii) any Indebtedness if the sole remedy of the holder thereof following such event or condition is to elect to convert such Indebtedness into Qualified Equity Interests (and cash in lieu of fractional shares); provided further that this paragraph (h) shall not apply to any such failure that (x) is remedied by the Borrower or any applicable Subsidiary or (y) waived (including in the form of amendment) by the requisite holders of the applicable item of Material Indebtedness in either case, prior to acceleration of all the Loans pursuant to this Section 7.01;

(i) an involuntary proceeding shall be commenced or an involuntary petition shall be filed seeking (i) liquidation, reorganization or other relief in respect of a Loan Party or any Subsidiary or its debts, or of a substantial part of its assets, under any Federal, state or foreign bankruptcy, insolvency, receivership or similar law now or hereafter in effect or (ii) the appointment of a receiver, trustee, custodian, sequestrator, conservator or similar official for a Loan Party or any Subsidiary or for a substantial part of its assets, and, in any such case, such proceeding or petition shall continue undismissed or unstayed for 60 days or an order or decree approving or ordering any of the foregoing shall be entered;

(j) a Loan Party or any Subsidiary shall (i) voluntarily commence any proceeding or file any petition seeking liquidation, reorganization or other relief under any Federal, state or foreign bankruptcy, insolvency, receivership or similar law now or hereafter in effect, (ii) consent to the institution of, or fail to contest in a timely and appropriate manner, any proceeding or petition described in Section 7.01(h), (iii) apply for or consent to the appointment of a receiver, trustee, custodian, sequestrator, conservator or similar official for a Loan Party or any Subsidiary or for a substantial part of its assets, (iv) file an answer admitting the material allegations of a petition filed against it in any such proceeding, (v) make a general assignment for the benefit of creditors or (vi) take any formal action for the purpose of effecting any of the foregoing;

(k) the Borrower or any Subsidiary shall become unable, admit in writing its inability or fail generally to pay its debts as they become due;

(l) one or more judgments for the payment of money (to the extent not paid or covered by insurance provided by a carrier that has a credit rating of at least "A" by A.M. Best Company, Inc. and has not denied or disputed coverage) in an aggregate amount in excess of $10,000,000 shall be rendered against a Loan Party, or any combination thereof and the same shall remain unpaid or undischarged for a period of 30 consecutive days during which execution shall not be effectively stayed, or any action shall be legally taken by a judgment creditor to attach or levy upon any assets of the Borrower or any Subsidiary to enforce any such judgment;

(m) an ERISA Event shall have occurred that, in the opinion of the Required Lenders, when taken together with all other ERISA Events that have occurred, could reasonably be expected to result in liability of the Borrower and the Subsidiaries in an aggregate amount exceeding $10,000,000 for all periods;

(n) any Lien purported to be created under any Security Document for any reason (other than pursuant to the terms thereof including as a result of a transaction permitted under this Agreement) shall cease to be, or shall be asserted by any Loan Party not to be, a valid and perfected (if and to the extent required to be perfected under the Loan Documents) Lien on any material portion of the Collateral with the priority required by the applicable Security Document, except (i) as a result of the sale or other disposition of the applicable Collateral in a transaction permitted under the Loan Documents or (ii) as a result of the Administrative Agent's failure to maintain possession of any stock certificates, promissory notes or other instruments delivered to it under the Collateral Agreement;

(o) any Loan Document shall for any reason be asserted by any Loan Party not to be a legal, valid and binding obligation of any party thereto;

(p) the Guarantees of the Obligations by the Borrower and the Subsidiary Loan Parties pursuant to the Collateral Agreement shall cease to be in full force and effect (other than in accordance with the terms of the Loan Documents) or shall be asserted by the Borrower or any Subsidiary Loan Party not to be in effect or not to be legal, valid and binding obligations;

(q) any Subordinated Indebtedness or any Guarantees thereof shall cease, for any reason, to be validly subordinated to the Obligations or the obligations of the Borrower and the Subsidiary Loan Parties in respect of their Guarantees under the Collateral Agreement, as applicable, or any Loan Party or the holders of at least 25% in aggregate principal amount of any Subordinated Indebtedness shall so assert;

(r) a Change of Control shall occur;

(s) any Material Regulatory Liability shall occur;

(t) any Registration shall be terminated, forfeited or revoked or shall fail to be renewed for any reason other than Borrower's reasonable determination, in consultation with the Administrative Agent, that such Registration is no longer required for its ongoing operations, or shall be modified in a manner materially adverse to the Borrower and its Subsidiaries;

(u) any writ, judgment, warrant of attachment, execution or similar process shall be issued or levied against a substantial or material part of a Loan Party's properties, and such writ, judgment, warrant of attachment, execution or similar process shall not be released, vacated or fully bonded within 30 days after commencement, filing or levy; or

(v) a Loan Party shall be enjoined, restrained or in any way prevented by any Governmental Authority from conducting any material part of its business for a material period of time; a Loan Party shall suffer the loss, revocation or termination of any material license, permit, lease or agreement necessary to its business; or any material property of a Loan Party shall be taken or impaired through condemnation,

then, and in every such event (other than an event with respect to the Borrower described in Section 7.01(h) or (i)), and at any time thereafter during the continuance of such event, the Administrative Agent may, and at the request of the Required Lenders shall, by notice to the Borrower, take either or both of the following actions, at the same or different times: (i) terminate the Commitments, and thereupon the Commitments shall terminate immediately, and (ii) declare the Loans then outstanding to be due and payable in whole (or in part, in which case any principal not so declared to be due and payable may thereafter be declared to be due and payable), and thereupon the principal of the Loans so declared to be due and payable, together with accrued interest thereon and all fees and other obligations of the Borrower accrued hereunder (including

any Make Whole/Prepayment Fee Amount), shall become due and payable immediately, without presentment, demand, protest or other notice of any kind, all of which are hereby waived by the Borrower; and in case of any event with respect to the Borrower described in Section 7.01(i) or (j), the Commitments shall automatically terminate and the principal of the Loans then outstanding, together with accrued interest thereon and all fees and other obligations of the Borrower accrued hereunder, shall automatically become due and payable, without presentment, demand, protest or other notice of any kind, all of which are hereby waived by the Borrower; provided that, the foregoing actions may not be taken in the case of an Event of Default under Section 6.12(b), until the ability to exercise the Cure Right under Section 7.02 has expired (but may be taken as soon as the ability to exercise the Cure Right has expired or to the extent that the Borrower has confirmed in writing that it does not intend to provide the Cure Amount).

SECTION 7.02. Right to Cure. Notwithstanding anything to the contrary contained in this Article 7, in the event that the Borrower fails to comply with the requirements of Section 6.12(b) as of the end of any relevant fiscal quarter, the Borrower shall have the right (the "Cure Right") (at any time during such fiscal quarter or thereafter until the date that is ten Business Days after the date on which the financial statements for such quarter were required to have been delivered in accordance with Section 5.01(b)), to issue Equity Interests for cash or otherwise receive cash contributions to its equity for such Equity Interests (the "Cure Amount"), the proceeds of which shall be required to prepay outstanding Term Loan Borrowings in accordance with Section 2.11(d), and thereupon the Borrower's compliance with Section 6.12(b) shall be recalculated giving effect to the following pro forma adjustments: (i) Revenue shall be increased, solely for the purposes of determining compliance with Section 6.12(b), including determining compliance with Section 6.12(b) as of the end of such fiscal quarter and applicable subsequent periods that include such fiscal quarter by an amount equal to the Cure Amount and (ii) if, after giving effect to the foregoing recalculations, the requirements of Section 6.12(b) shall be satisfied, then the requirements of Section 6.12(b) shall be deemed satisfied as of the end of the relevant fiscal quarter with the same effect as though there had been no failure to comply therewith at such date, and the applicable breach or default of Section 6.12(b) that had occurred shall be deemed cured for the purposes of this Agreement. Notwithstanding anything herein to the contrary, (v) during the term of this Agreement, the Cure Right shall not be exercised more than two times, (w) the Cure Right shall not be exercised in consecutive fiscal quarters, (x) in each four fiscal quarter period there shall be a period of at least two fiscal quarter in which the Cure Right is not exercised, (y) the Cure Amount shall be no greater than the amount required for purposes of complying with 6.12(b) for the applicable fiscal quarter and (z) no Event of Default may arise under Section 6.12(b) until the earlier of (A) the 10th Business Day after the day on which the relevant financial statements are required to be delivered (unless the Cure Right has been exercised two times in the applicable four consecutive fiscal quarter period), and then only to the extent the Cure Amount has not been received on or prior to such date and (B) the date (if any) on which the Borrower delivers notice to the Administrative Agent that the Cure Right with respect to such breach will not be exercised.

ARTICLE VIII

The Agents

SECTION 8.01. Appointment. Each Lender hereby irrevocably designates and appoints the Administrative Agent as the agent of such Lender under this Agreement and the other Loan Documents, and each such Lender irrevocably authorizes the Administrative Agent, in such capacity, to take such action on its behalf under the provisions of this Agreement and the other Loan Documents and to exercise such powers and perform such duties as are expressly delegated to the Administrative Agent by the terms of this Agreement and the other Loan Documents, together with such other powers as are reasonably incidental thereto. The Lenders hereby authorize the Administrative Agent to enter into any intercreditor agreement or arrangement permitted under this Agreement and any such intercreditor agreement or arrangement is binding upon the Lenders. Notwithstanding any provision to the contrary elsewhere in this Agreement, the

Administrative Agent shall not have any duties or responsibilities, except those expressly set forth herein, or any fiduciary relationship with any Lender, and no implied covenants, functions, responsibilities, duties, obligations or liabilities shall be read into this Agreement or any other Loan Document or otherwise exist against the Administrative Agent.

SECTION 8.02. The Administrative Agent. The Administrative Agent may execute any of its duties under this Agreement and the other Loan Documents and exercise its rights and powers hereunder or under any other Loan Document by or through agents, sub-agents or attorneys-in-fact and shall be entitled to advice of counsel concerning all matters pertaining to such duties. The Administrative Agent shall not be responsible for the negligence or misconduct of any agents, sub-agents or attorneys in-fact selected by it with reasonable care. The Administrative Agent and any such sub-agent may perform any and all of its duties and exercise its rights and powers by or through their respective Related Parties. The exculpatory provisions of this Article VIII shall apply to any such sub-agent and to the Related Parties of the Administrative Agent and any such sub-agent, and shall apply to their respective activities in connection with the syndication of the credit facilities provided for herein as well as activities as Administrative Agent.

SECTION 8.03. Exculpatory Provisions. Neither any Agent nor any of their respective officers, directors, employees, agents, advisors, attorneys-in-fact or affiliates shall be (i) liable for any action lawfully taken or omitted to be taken by it or such Person under or in connection with this Agreement or any other Loan Document (except to the extent that any of the foregoing are found by a final and nonappealable decision of a court of competent jurisdiction to have resulted from its or such Person's own gross negligence or willful misconduct) or (ii) responsible in any manner to any of the Lenders for any recitals, statements, representations or warranties made by any Loan Party or any officer thereof contained in this Agreement or any other Loan Document or in any certificate, report, statement or other document referred to or provided for in, or received by the Agents under or in connection with, this Agreement or any other Loan Document or for the value, validity, effectiveness, genuineness, enforceability or sufficiency of this Agreement or any other Loan Document or for any failure of any Loan Party a party thereto to perform its obligations hereunder or thereunder. The Agents shall not be under any obligation to any Lender to ascertain or to inquire as to the observance or performance of any of the agreements contained in, or conditions of, this Agreement or any other Loan Document, or to inspect the properties, books or records of any Loan Party. The Administrative Agent does not warrant, nor accept responsibility, nor shall the Administrative Agent have any liability with respect to the administration, submission or any other matter related to the rates in the definition of "SOFR", or "Term SOFR" or with respect to any comparable or successor rate thereto including, without limitation, whether the composition or characteristics of any such alternative, successor or replacement reference rate, as it may or may not be adjusted pursuant to Section 2.14, will be similar to, or produce the same value or economic equivalence of, Term SOFR.

SECTION 8.04. Reliance by Administrative Agent. The Administrative Agent shall be entitled to rely, and shall be fully protected in relying, upon any instrument, writing, resolution, notice, consent, certificate, affidavit, letter, telecopy or email message, statement, order or other document or conversation believed by it to be genuine and correct and to have been signed, sent or made by the proper Person or Persons and upon advice and statements of legal counsel (including counsel to the Borrower), independent accountants and other experts selected by the Administrative Agent. The Administrative Agent may deem and treat the payee of any Note as the owner thereof for all purposes unless a written notice of assignment, negotiation or transfer thereof shall have been filed with the Administrative Agent. The Administrative Agent shall be fully justified in failing or refusing to take any action under this Agreement or any other Loan Document unless it shall first receive such advice or concurrence of the Required Lenders (or, if so specified by this Agreement, all Lenders) as it deems appropriate or it shall first be indemnified to its satisfaction by the Lenders against any and all liability and expense that may be incurred by it by reason of taking or continuing to take any such action. The Administrative Agent shall in

all cases be fully protected in acting, or in refraining from acting, under this Agreement and the other Loan Documents in accordance with a request of the Required Lenders (or, if so specified by this Agreement, all Lenders), and such request and any action taken or failure to act pursuant thereto shall be binding upon all the Lenders and all future holders of the Loans.

SECTION 8.05. Notice of Default. The Administrative Agent shall not be deemed to have knowledge or notice of the occurrence of any Default or Event of Default unless the Administrative Agent has received notice from a Lender or the Borrower referring to this Agreement, describing such Default or Event of Default and stating that such notice is a "notice of default". In the event that the Administrative Agent receives such a notice, the Administrative Agent shall give notice thereof to the Lenders. The Administrative Agent shall take such action with respect to such Default or Event of Default as shall be reasonably directed by the Required Lenders (or, if so specified by this Agreement, all Lenders); provided that unless and until the Administrative Agent shall have received such directions, the Administrative Agent may (but shall not be obligated to) take such action, or refrain from taking such action, with respect to such Default or Event of Default as it shall deem advisable in the best interests of the Lenders.

SECTION 8.06. Non-Reliance on Agents and Other Lenders. Each Lender expressly acknowledges that neither the Agents nor any of their respective officers, directors, employees, agents, advisors, attorneys-in-fact or affiliates have made any representations or warranties to it and that no act by any Agent hereafter taken, including any review of the affairs of a Loan Party or any affiliate of a Loan Party, shall be deemed to constitute any representation or warranty by any Agent to any Lender. Each Lender represents to the Agents that it has, independently and without reliance upon any Agent or any other Lender, and based on such documents and information as it has deemed appropriate, made its own appraisal of and investigation into the business, operations, property, financial and other condition and creditworthiness of the Loan Parties and their affiliates and made its own decision to make its Loans hereunder and enter into this Agreement. Each Lender also represents that it will, independently and without reliance upon any Agent or any other Lender, and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit analysis, appraisals and decisions in taking or not taking action under this Agreement and the other Loan Documents, and to make such investigation as it deems necessary to inform itself as to the business, operations, property, financial and other condition and creditworthiness of the Loan Parties and their affiliates. Except for notices, reports and other documents expressly required to be furnished to the Lenders by the Administrative Agent hereunder, the Administrative Agent shall not have any duty or responsibility to provide any Lender with any credit or other information concerning the business, operations, property, condition (financial or otherwise), prospects or creditworthiness of any Loan Party or any affiliate of a Loan Party that may come into the possession of the Administrative Agent or any of its respective officers, directors, employees, agents, advisors, attorneys-in-fact or affiliates.

SECTION 8.07. Indemnification. The Lenders agree to indemnify each Agent and its officers, directors, employees, affiliates, agents, advisors and controlling persons (each, an "Agent Indemnitee") (to the extent not reimbursed by the Borrower and without limiting the obligation of the Borrower to do so), ratably according to their respective Aggregate Exposure Percentages in effect on the date on which indemnification is sought under this Section (or, if indemnification is sought after the date upon which the Commitments shall have terminated and the Loans shall have been paid in full, ratably in accordance with such Aggregate Exposure Percentages immediately prior to such date), from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind whatsoever that may at any time (whether before or after the payment of the Loans) be imposed on, incurred by or asserted against such Agent Indemnitee in any way relating to or arising out of, the Commitments, this Agreement, any of the other Loan Documents or any documents contemplated by or referred to herein or therein or the transactions contemplated hereby or thereby or any action taken or omitted by such Agent Indemnitee under or in connection with any of the foregoing;

provided that no Lender shall be liable for the payment of any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements that are found by a final and nonappealable decision of a court of competent jurisdiction to have resulted from such Agent Indemnitee's gross negligence or willful misconduct. The agreements in this Section shall survive the termination of this Agreement and the payment of the Loans and all other amounts payable hereunder.

SECTION 8.08. Agent in Its Individual Capacity. Each Agent and its affiliates may make loans to, accept deposits from and generally engage in any kind of business with any Loan Party as though such Agent were not an Agent. With respect to its Loans made or renewed by it, each Agent shall have the same rights and powers under this Agreement and the other Loan Documents as any Lender and may exercise the same as though it were not an Agent, and the terms "Lender" and "Lenders" shall include each Agent in its individual capacity.

SECTION 8.09. Successor Administrative Agent. The Administrative Agent may resign as Administrative Agent upon 10 days' notice to the Lenders and the Borrower. If the Administrative Agent shall resign as Administrative Agent under this Agreement and the other Loan Documents, then the Required Lenders shall appoint from among the Lenders a successor agent for the Lenders, which successor agent shall (unless an Event of Default under Sections 7.01(a), 7.01(b), 7.01(h), 7.01(i) or 7.01(j) with respect to the Borrower shall have occurred and be continuing) be subject to approval by the Borrower (which approval shall not be unreasonably withheld, conditioned or delayed), whereupon such successor agent shall succeed to the rights, powers and duties of the Administrative Agent, and the term "Administrative Agent" shall mean such successor agent effective upon such appointment and approval, and the former Administrative Agent's rights, powers and duties as Administrative Agent shall be terminated, without any other or further act or deed on the part of such former Administrative Agent or any of the parties to this Agreement or any holders of the Loans. If no successor agent has accepted appointment as Administrative Agent by the date that is 10 days following a retiring Administrative Agent's notice of resignation, the retiring Administrative Agent's resignation shall nevertheless thereupon become effective, and the Lenders shall assume and perform all of the duties of the Administrative Agent hereunder until such time, if any, as the Required Lenders appoint a successor agent as provided for above, provided, however, that any such successor agent receiving payments from the Loan Parties shall be a "U.S. person" and a "financial institution" within the meaning of Treasury Regulations Section 1.1441-1. After any retiring Administrative Agent's resignation as Administrative Agent, the provisions of this Section 8 and of Section 9.03 shall continue to inure to its benefit.

SECTION 8.10. Erroneous Payments.

(a) If the Administrative Agent (x) notifies a Lender or any Person who has received funds on behalf of a Lender (any such Lender or other recipient (and each of their respective successors and assigns), a "Payment Recipient") that the Administrative Agent has determined in its sole discretion (whether or not after receipt of any notice under immediately succeeding clause (b)) that any funds (as set forth in such notice from the Administrative Agent) received by such Payment Recipient from the Administrative Agent or any of its Affiliates were erroneously or mistakenly transmitted to, or otherwise erroneously or mistakenly received by, such Payment Recipient (whether or not known to such Lender or other Payment Recipient on its behalf) (any such funds, whether transmitted or received as a payment, prepayment or repayment of principal, interest, fees, distribution or otherwise, individually and collectively, an "Erroneous Payment") and (y) demands in writing the return of such Erroneous Payment (or a portion thereof), such Erroneous Payment shall at all times remain the property of the Administrative Agent pending its return or repayment as contemplated below in this Section 8.11 and held in trust for the benefit of the Administrative Agent, and such Lender shall (or, with respect to any Payment Recipient who received such funds on its behalf, shall cause such Payment Recipient to) promptly, but in no event later than two Business Days thereafter (or such later date as the Administrative Agent may, in its sole discretion, specify

in writing), return to the Administrative Agent the amount of any such Erroneous Payment (or portion thereof) as to which such a demand was made, in same day funds (in the currency so received). A notice of the Administrative Agent to any Payment Recipient under this clause (a) shall be conclusive, absent manifest error.

(b) Without limiting immediately preceding clause (a), each Lender or any Person who has received funds on behalf of a Lender (and each of their respective successors and assigns), agrees that if it receives a payment, prepayment or repayment (whether received as a payment, prepayment or repayment of principal, interest, fees, distribution or otherwise) from the Administrative Agent (or any of its Affiliates) (x) that is in a different amount than, or on a different date from, that specified in this Agreement or in a notice of payment, prepayment or repayment sent by the Administrative Agent (or any of its Affiliates) with respect to such payment, prepayment or repayment, (y) that was not preceded or accompanied by a notice of payment, prepayment or repayment sent by the Administrative Agent (or any of its Affiliates), or (z) that such Lender or other such recipient, otherwise becomes aware was transmitted, or received, in error or by mistake (in whole or in part), then in each such case:

(i) it acknowledges and agrees that (A) in the case of immediately preceding clauses (x) or (y), an error and mistake shall be presumed to have been made (absent written confirmation from the Administrative Agent to the contrary) or (B) an error and mistake has been made (in the case of immediately preceding clause (z)), in each case, with respect to such payment, prepayment or repayment; and

(ii) such Lender shall use commercially reasonable efforts to (and shall use commercially reasonable efforts to cause any other recipient that receives funds on its respective behalf to) promptly (and, in all events, within one Business Day of its knowledge of the occurrence of any of the circumstances described in immediately preceding clauses (x), (y) and (z)) notify the Administrative Agent of its receipt of such payment, prepayment or repayment, the details thereof (in reasonable detail) and that it is so notifying the Administrative Agent pursuant to this Section 8.11(b).

(iii) For the avoidance of doubt, the failure to deliver a notice to the Administrative Agent pursuant to this Section 8.11(b) shall not have any effect on a Payment Recipient's obligations pursuant to Section 8.11(a) or on whether or not an Erroneous Payment has been made.

(c) Each Lender hereby authorizes the Administrative Agent to set off, net and apply any and all amounts at any time owing to such Lender under any Loan Document, or otherwise payable or distributable by the Administrative Agent to such Lender under any Loan Document with respect to any payment of principal, interest, fees or other amounts, against any amount that the Administrative Agent has demanded to be returned under immediately preceding clause (a).

(d) The parties hereto agree that (x) irrespective of whether the Administrative Agent may be equitably subrogated, in the event that an Erroneous Payment (or portion thereof) is not recovered from any Payment Recipient that has received such Erroneous Payment (or portion thereof) for any reason, the Administrative Agent shall be subrogated to all the rights and interests of such Payment Recipient (and, in the case of any Payment Recipient who has received funds on behalf of a Lender, to the rights and interests of such Lender) under the Loan Documents with respect to such amount (the "Erroneous Payment Subrogation Rights") and (y) an Erroneous Payment shall not pay, prepay, repay, discharge or otherwise satisfy any Obligations owed by the Borrower; provided that this Section 8.11 shall not be interpreted to increase (or accelerate the due date for), or have the effect of increasing (or accelerating the due date for), the Obligations of the Borrower relative to the amount (or timing for payment) of the Obligations that would have been payable had such Erroneous Payment not been made by the Administrative Agent; provided,

further, that for the avoidance of doubt, immediately preceding clauses (x) and (y) shall not apply to the extent any such Erroneous Payment is, and solely with respect to the amount of such Erroneous Payment that is, comprised of funds received by the Administrative Agent from, or on behalf of (including through the exercise of remedies under any Loan Document), the Borrower for the purpose of a payment on the Obligations.

(e) To the extent permitted by applicable law, no Payment Recipient shall assert any right or claim to an Erroneous Payment, and hereby waives, and is deemed to waive, any claim, counterclaim, defense or right of set-off or recoupment with respect to any demand, claim or counterclaim by the Administrative Agent for the return of any Erroneous Payment received, including, without limitation, any defense based on "discharge for value" or any similar doctrine.

Each party's obligations, agreements and waivers under this Section 8.11 shall survive the resignation or replacement of the Administrative Agent, any transfer of rights or obligations by, or the replacement of, a Lender, the termination of the applicable Commitments or the repayment, satisfaction or discharge of all Obligations (or any portion thereof) under any Loan Document.

ARTICLE IX

Miscellaneous

SECTION 9.01. Notices.

(a) Except in the case of notices and other communications expressly permitted to be given by telephone, all notices and other communications provided for herein shall be in writing and shall be delivered by hand or overnight courier service, mailed by certified or registered mail or sent by telecopy, as follows:

(i) if to the Borrower, to:

Tempus Labs, Inc.
600 West Chicago Avenue, Suite 510
Chicago, Illinois 60654
Attention: Chief Financial Officer
Email: jim.rogers@tempus.com

with a copy to:

Cooley LLP
110 N. Wacker Drive
Chicago, Illinois 60606-1511
Attention: Addison Pierce
Email: afpierce@cooley.com

(ii) if to the Administrative Agent or the Collateral Agent, to:

Ares Capital Corporation
245 Park Avenue, 44th Floor
New York, New York 10167
Attn: Middle Office DL - Tempus
Email: agency@aresmgmt.com; middleofficedl@aresmgmt.com; aresagency@alterdomus.com

with a copy to:

Katten Muchin Rosenman LLP
525 W. Monroe St.
Chicago, Illinois 60661
Attention: Michael A. Jacobson, Esq.
Email: michael.jacobson@katten.com

(iii) if to any other Lender, to it at its address (or telecopy number) set forth in its Administrative Questionnaire.

(b) Notices and other communications to the Lenders hereunder may be delivered or furnished by electronic communications pursuant to procedures approved by the Administrative Agent provided that the foregoing shall not apply to notices to any Lender pursuant to Article II or of a Default if such Lender has notified the Administrative Agent that it is incapable of receiving notices under such Article by electronic communication and provided that the Administrative Agent shall in any event also receive hard copies of the notices described in this proviso and, to the extent requested, any other documents delivered electronically under this Agreement. The Administrative Agent or the Borrower may, in its discretion, agree to accept notices and other communications to it hereunder by electronic communications pursuant to procedures approved by it, provided that approval of such procedures may be limited to particular notices or communications. All such notices and other communications (i) sent to an e-mail address shall be deemed received upon the sender's receipt of an acknowledgement from the intended recipient (such as by the "return receipt requested" function, as available, return e-mail or other written acknowledgement); provided that if not given during the normal business hours of the recipient, such notice or communication shall be deemed to have been given at the opening of business on the next Business Day for the recipient, and (ii) posted to an Internet or intranet website shall be deemed received upon the deemed receipt by the intended recipient at its e-mail address as described in the foregoing clause (i) of any required notification that such notice or communication is available and identifying the website address therefor.

(c) Any party hereto may change its address or telecopy number for notices and other communications hereunder by notice to the Administrative Agent (and, in the case of the Administrative Agent, by written notice to the Borrower). All notices and other communications given to any party hereto in accordance with the provisions of this Agreement shall be deemed to have been given as follows: notices sent by hand or overnight courier service, or mailed by certified or registered mail, shall be deemed to have been given when received; notices sent by telecopier (with a send successful notice) shall be deemed to have been given when sent (except that, if not given during normal business hours for the recipient, shall be deemed to have been given at the opening of business on the next business day for the recipient).

SECTION 9.02. Waivers; Amendments.

(a) No failure or delay by the Administrative Agent, the Collateral Agent or any Lender in exercising any right or power hereunder or under any other Loan Document shall operate as a waiver thereof, nor shall any single or partial exercise of any such right or power, or any abandonment or discontinuance of steps to enforce such a right or power, preclude any other or further exercise thereof or the exercise of any other right or power. The rights and remedies of the Administrative Agent, the Collateral Agent and the Lenders hereunder and under the other Loan Documents are cumulative and are not exclusive of any rights or remedies that they would otherwise have. No waiver of any provision of any Loan Document or consent to any departure by any Loan Party therefrom shall in any event be effective unless

the same shall be permitted by Section 9.02(b), and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. Without limiting the generality of the foregoing, the making of a Loan shall not be construed as a waiver of any Default, regardless of whether the Administrative Agent, any Lender or the Collateral Agent may have had notice or knowledge of such Default at the time.

(b) Neither this Agreement nor any other Loan Document nor any provision hereof or thereof may be waived, amended or modified except, in the case of this Agreement, pursuant to an agreement or agreements in writing entered into by the Borrower and the Required Lenders (with a fully executed copy thereof delivered to the Administrative Agent) or, in the case of any other Loan Document, pursuant to an agreement or agreements in writing entered into by the Administrative Agent and the Loan Party or Loan Parties that are parties thereto (and, if party thereto, the Collateral Agent), in each case with the consent of the Required Lenders; provided that no such agreement shall:

(i) increase the Commitment of any Lender without the written consent of such Lender, (it being understood that a waiver of any Default or mandatory prepayment or mandatory reduction of any Commitments shall not constitute an increase of any Commitment of any Lender);

(ii) reduce the principal amount of any Loan or reduce the rate of interest thereon, or reduce any fees payable hereunder (including, without limitation, ~~the~~any Make Whole/Prepayment Fee Amount), without the written consent of each Lender affected thereby; provided, however, that only the consent of the Required Lenders shall be necessary to amend the definition of "Default Rate" or to waive any obligation of the Borrower to pay interest at the Default Rate,

(iii) postpone the maturity of any Loan (it being understood that a waiver of any Default, Event of Default, or mandatory prepayment shall not constitute an extension of any maturity date), or any date for the payment of any interest or fees payable hereunder, or reduce the amount of, waive or excuse any such payment, or postpone the scheduled date of expiration of any Commitment, without the written consent of each Lender adversely affected thereby, it being understood that the waiver of any condition precedent or the waiver of any Default or mandatory prepayment requirement shall not constitute a postponement or reduction hereunder,

(iv) change or have the effect of changing the priority or pro rata treatment of any payments (including voluntary and mandatory prepayments), Liens, proceeds of Collateral or reductions in Commitments (including as a result in whole or in part of allowing the issuance or incurrence, pursuant to this Agreement or otherwise, of new loans or other Indebtedness having any priority over any of the Obligations in respect of payments, Liens, Collateral or proceeds of Collateral, in exchange for any Obligations or otherwise), without the written consent of each Lender directly and adverse affected thereby,

(v) change any of the provisions of this Section 9.02, the definition of "Required Lenders" or any other provision of any Loan Document specifying the number or percentage of Lenders required to waive, amend or modify any rights thereunder or make any determination or grant any consent thereunder, without the written consent of each Lender,

(vi) change the percentage set forth in the definition of "Required Lenders" or any other provision of any Loan Document specifying the number or percentage of Lenders required to waive, amend or modify any rights thereunder or make any determination or grant any consent thereunder, without the written consent of each Lender,

(vii) release the Borrower or any Subsidiary Loan Party from its Guarantee under the Collateral Agreement (except as provided in Section 6.03 or in the Collateral Agreement) or limit its liability in respect of such Guarantee, without the written consent of each Lender, or

(viii) release all or substantially all the Collateral from the Liens of the Security Documents (except as provided in Section 6.03 or in the Collateral Agreement), without the written consent of each Lender.

provided, further, that (A) no such agreement shall amend, modify or otherwise affect the rights or duties of the Administrative Agent without the prior written consent of the Administrative Agent and (B) notwithstanding the preceding clause (iv), only those Lenders that have not been provided a reasonable opportunity, as determined in the good faith judgment of the Administrative Agent, to receive the most-favorable treatment under or in connection with the applicable amendment, waiver or supplement described in the preceding clause (iv) (other than the right to receive customary administrative agency, arranging, underwriting and other similar fees) that is provided to any other Person, including the opportunity to participate on a pro rata basis on the same terms in any new loans or other Indebtedness permitted to be issued as a result of such amendment, waiver or supplement, shall be deemed to be directly and adversely affected by such amendment, waiver or supplement. In connection with any proposed amendment, modification, waiver or termination (a "Proposed Change") requiring the consent of all affected Lenders, if the consent of the Required Lenders to such Proposed Change is obtained, but the consent to such Proposed Change of other Lenders whose consent is required is not obtained (any such Lender whose consent is not obtained as described in this Section 9.02(b) being referred to as a "Non-Consenting Lender"), then, so long as the Lender that is acting as the Administrative Agent is not a Non-Consenting Lender, at the Borrower's request, any assignee that is acceptable to the Administrative Agent shall have the right, with the Administrative Agent's consent, to purchase from such Non-Consenting Lender, and such Non-Consenting Lender agrees that it shall, upon the Borrower's request, sell and assign to such assignee, at no expense to such Non-Consenting Lender, all the Term Loans of such Non-Consenting Lender for an amount equal to the principal balance of all Term Loans held by such Non-Consenting Lender and all accrued interest and fees with respect thereto through the date of sale (including amounts under Sections 2.15, 2.16 and 2.17) so long as such principal balance of all other Non-Consenting Lenders is similarly purchased, such purchase and sale to be consummated pursuant to an executed Assignment and Assumption in accordance with Section 9.04(b) (which Assignment and Assumption need not be signed by such Non-Consenting Lender). A copy of each amendment, waiver or other modification to this Agreement or any other Loan Document shall be furnished by the Borrower to the Administrative Agent.

(c) Notwithstanding the provisions of Section 9.02(b), this Agreement may be amended (or amended and restated) with the written consent of the Required Lenders, the Administrative Agent and the Borrower (i) to add one or more additional credit facilities to this Agreement and to permit the extensions of credit from time to time thereunder and the accrued interest and fees in respect thereof to share ratably in the benefits of this Agreement and the other Loan Documents with the Term Loans and the accrued interest and fees in respect thereof, and (ii) to include appropriately the Lenders holding such credit facilities in any determination of the Required Lenders. In addition, this Agreement may be amended with the written consent of the Administrative Agent, the Borrower and the Lenders providing the relevant Replacement Term Loans (as defined below) to permit the refinancing of all outstanding Term Loans (the "Refinanced Term Loans") and, if applicable, related outstanding commitments, with a replacement term loan tranche hereunder (the "Replacement Term Loans"); provided that (i) the aggregate principal amount of such Replacement Term Loans shall not exceed the aggregate principal amount of such Refinanced Term Loans, (ii) the Applicable Rate for such Replacement Term Loans shall not be higher than the Applicable Rate for such Refinanced Term Loans, (iii) the weighted average life to maturity of such Replacement Term Loans shall not be shorter than the weighted average life to maturity of such Refinanced Term Loans at the

time of such refinancing (except to the extent of nominal amortization for periods where amortization has been eliminated as a result of prepayment of the Refinanced Term Loans) and (iv) all other terms applicable to such Replacement Term Loans shall be substantially identical to, or less favorable to the Lenders providing such Replacement Term Loans than, those applicable to such Refinanced Term Loans, except to the extent necessary to provide for covenants and other terms applicable to any period after the latest final maturity of the Refinanced Term Loans in effect immediately prior to such refinancing.

SECTION 9.03. Expenses; Indemnity; Damage Waiver.

(a) The Borrower shall pay (i) all reasonable and documented out-of-pocket expenses incurred by the Agents and their respective Affiliates, including the reasonable and documented fees, charges and disbursements of counsel for the Agents, in connection with the preparation and administration of the Loan Documents or any amendments, modifications or waivers of the provisions thereof (limited to, in the case of legal fees and expenses, all reasonable and documented costs and out-of-pocket expenses of one legal counsel and, to the extent necessary, one local counsel in each relevant jurisdiction, but no other advisors without the Borrower's prior consent) and (ii) all reasonable and documented out-of-pocket expenses incurred by the Administrative Agent or any Lender, including the fees, charges and disbursements of any counsel for the Administrative Agent or any Lender (limited to, in the case of legal fees and expenses, all reasonable and documented costs and out-of-pocket expenses of one legal counsel and, to the extent necessary, one local counsel in each relevant jurisdiction, but no other advisors without the Borrower's prior consent), in connection with the enforcement or protection of its rights in connection with the Loan Documents, including its rights under this Section 9.03, or in connection with the Loans made hereunder, including all such reasonable and documented out-of-pocket expenses incurred during any workout, restructuring or negotiations in respect of such Loans.

(b) The Borrower shall indemnify the Administrative Agent, the Collateral Agent and each Lender, and each Related Party of any of the foregoing Persons (each such Person being called an "Indemnitee"), and hold each Indemnitee harmless, from and against any and all losses, claims, damages, liabilities and related expenses, including the reasonable and documented fees, charges and disbursements of any counsel for any Indemnitee (limited to, in the case of fees, charges and disbursements of any counsel, one counsel to such Indemnitees, taken as a whole, one local counsel in each relevant jurisdiction to all such Indemnitees, taken as a whole, and, solely in the event of a conflict of interest, one additional counsel (and, if necessary, one local counsel in each relevant jurisdiction)), incurred by or asserted against any Indemnitee arising out of, in connection with, or as a result of (i) the execution or delivery of any Loan Document or any other agreement or instrument contemplated hereby, the performance by the parties to the Loan Documents of their respective obligations thereunder or the consummation of the Transactions or any other transactions contemplated hereby, (ii) any Loan or the use of the proceeds therefrom, (iii) any actual or alleged presence or Release of Hazardous Materials on, at, under or emanating from any Mortgaged Property or any other property currently or formerly owned or operated by the Borrower or any of its Subsidiaries, or any actual or alleged Environmental Liability related in any way to the Borrower or any of its Subsidiaries or their respective properties or operations, or (iv) any actual or prospective claim, litigation, investigation or proceeding relating to any of the foregoing, whether based on contract, tort or any other theory and regardless of whether any Indemnitee is a party thereto or such litigation, claim, investigation or proceeding is brought by a third party or by the Borrower or its Affiliates, provided that no Indemnitee shall be entitled to indemnity in respect of any such losses, claims, damages, liabilities or related expenses to the extent that (i) the same is found by a final, non-appealable judgment of a court of competent jurisdiction to have resulted from (a) the gross negligence, willful misconduct or bad faith of such Indemnitee or (b) a material breach by an Indemnitee of its obligations under this Agreement, (ii) the same arises solely from a dispute among Indemnitees (other than any claim against Ares Capital Corporation solely in its capacity as Administrative Agent) or (iii) any settlement is effected without the Borrower's consent; provided, further, that each Indemnitee agrees (by accepting the benefits hereof) to refund and

return any and all amounts paid or caused to be paid by the Borrower to such Indemnitee to the extent any of the foregoing items described in clauses (i) through (iii) occurs. For the avoidance of doubt, this Section 9.03 shall not apply to Taxes (other than Taxes arising from a non-Tax claim). Payments under this Section 9.03(b) shall be made by the Borrower to the Administrative Agent for the benefit of the relevant Indemnitee.

(c) To the extent that the Borrower fails to pay any amount required to be paid by it to the Administrative Agent or the Collateral Agent under Sections 9.03(a) or (b), each Lender severally agrees to pay to the Administrative Agent or the Collateral Agent, as applicable, such Lender's pro rata share (determined as of the time that the applicable unreimbursed expense or indemnity payment is sought) of such unpaid amount, provided that the unreimbursed expense or indemnified loss, claim, damage, liability or related expense, as applicable, was incurred by or asserted against the Administrative Agent or the Collateral Agent in its capacity as such. For purposes hereof, a Lender's "pro rata share" shall be determined based upon its share of the aggregate outstanding Term Loans at the time.

(d) To the extent permitted by applicable law, no party hereto shall assert, and each party hereto hereby waives, any claim against any other Person party hereto, on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Agreement or any agreement or instrument contemplated hereby, the Transactions, any Loan or the use of the proceeds thereof (other than in respect of any such damages incurred or paid by an Indemnitee to a third party).

(e) All amounts due under this Section 9.03 shall be payable not later than 10 days after written demand therefor.

SECTION 9.04. Successors and Assigns.

(a) The provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns permitted hereby, except that (i) the Borrower may not assign or otherwise transfer any of its rights or obligations hereunder without the prior written consent of each Lender (except as permitted by Section 6.03) (and any attempted assignment or transfer by the Borrower without such consent shall be null and void) and (ii) no Lender may assign or otherwise transfer its rights or obligations hereunder except (i) to an Assignee pursuant to an assignment made in accordance with the provisions of Section 9.04(b) (such an assignee, an "Eligible Assignee"), (ii) by way of participation in accordance with the provisions of Section 9.04(e) or (iii) by way of pledge or assignment of a security interest subject to the restrictions of Section 9.04(g) (and any other attempted assignment or transfer by any party hereto shall be null and void); provided, however, that notwithstanding the foregoing, no Lender may assign or transfer by participation any of its rights or obligations hereunder to (i) a natural Person, (ii) to the Borrower or any of its respective Subsidiaries or (iii) any Defaulting Lender. Nothing in this Agreement, express or implied, shall be construed to confer upon any Person (other than the parties hereto, their respective successors and assigns permitted hereby, Participants (to the extent provided in Section 9.04(c)) and, to the extent expressly contemplated hereby, the Related Parties of each of the Administrative Agent and the Lenders) any legal or equitable right, remedy or claim under or by reason of this Agreement.

(b) (i) Subject to the conditions set forth in clause (b)(ii) below, any Lender may assign to one or more assignees ("Assignees") all or a portion of its rights and obligations under this Agreement (including all or a portion of its Commitment and the Loans at the time owing to it) with the prior written consent (such consent not to be unreasonably withheld or delayed) of:

(1) the Borrower, provided that no consent of the Borrower shall be required (x) for assignments to any Lender or Affiliate of a Lender or an Approved Fund (as defined below) thereof or (y) if an Event of Default under Sections 7.01(a) or 7.01(b) or Sections 7.01(i) or 7.01(j), solely with respect to the Borrower, has occurred and is continuing, any Assignee or an assignment of all or a portion of the Loans pursuant to Section 9.04(i); provided, further, that (x) the Borrower may withhold its consent (in its sole discretion) in respect of an assignment to an Affiliate (other than, in each case, Affiliates that constitute bona fide debt funds primarily investing in loans) of a Disqualified Institution and (y) the Borrower shall be deemed to have consented to an assignment unless it shall object thereto by written notice to the Administrative Agent within five (5) Business Days after having received notice thereof; and

(2) the Administrative Agent, provided that no consent of the Administrative Agent shall be required for an assignment (i) of all or any portion of a Term Loan to a Lender, an Affiliate of a Lender or an Approved Fund, (ii) of all or a portion of the Loans pursuant to Section 9.04(k) or Section 9.04(l) or (iii) from an Agent to its Affiliates.

Notwithstanding the foregoing or anything to the contrary set forth herein, (i) no Lender may assign or transfer by participation any of its rights or obligations hereunder to any Person that is a Defaulting Lender or, unless a Specified Event of Default has occurred and is continuing, a Disqualified Institution and (ii) to the extent any Lender is required to assign any portion of its Commitments, Loans and other rights, duties and obligations hereunder in order to comply with applicable Laws, such assignment may be made by such Lender without the consent of the Borrower, the Administrative Agent or any other party hereto so long as such Lender complies with the requirements of Section 9.04(b)(ii).

(ii) Assignments shall be subject to the following conditions:

(1) except in the case of an assignment to a Lender or an Affiliate of a Lender or an assignment of the entire remaining amount of the assigning Lender's Commitment or Loans, the amount of the Commitment or Loans of the assigning Lender subject to each such assignment (determined as of the date the Assignment and Assumption with respect to such assignment is delivered to the Administrative Agent) shall not be less than $5,000,000 unless each of the Borrower and the Administrative Agent otherwise consents; provided that no such consent of the Borrower shall be required (x) for an assignment by a Lender to an Affiliate or an Approved Fund of a Lender or (y) if an Event of Default under Section 7.01(a), (b), (i) or (j) has occurred and is continuing, and that contemporaneous assignments to Approved Funds related to the same Lender shall be aggregated when calculating such minimum assignment amounts; provided further that, consent of the Borrower will be deemed to have been given if the Borrower has not responded within five (5) business days of a request for such consent; provided, further, that, unless a Specified Event of Default has occurred and is continuing, no assignment or participations shall be made to Disqualified Institutions or Competitors;

(2) each partial assignment shall be made as an assignment of a proportionate part of all the assigning Lender's rights and obligations under this Agreement;

(3) the parties to each assignment shall execute and deliver to the Administrative Agent an Assignment and Assumption, together with a processing and recordation fee of $3,500; and

(4) the assignee, if it is not already a Lender, shall deliver to the Administrative Agent an Administrative Questionnaire, the applicable tax forms described in 2.17(f) and all documentation and other information required by regulatory authorities under applicable "know your customer" and anti-money laundering rules and regulations, including, without limitation, the USA Patriot Act.

For purposes of this Section 9.04(b):

"Approved Fund" means, with respect to any Lender, any Fund that is administered, advised or managed by (a) a Lender, (b) an Affiliate of a Lender, (c) an entity or an Affiliate of an entity that administers, advises or manages a Lender or (d) a limited partner or member of any of the foregoing.

"Fund" means any Person (other than a natural person) that is engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course.

(c) Subject to acceptance and recording thereof pursuant to Section 9.04(b)(iv), from and after the recordation date of each Assignment and Assumption in the Register, the assignee thereunder shall be a party hereto and, to the extent of the interest assigned by such Assignment and Assumption, have the rights and obligations of a Lender under this Agreement, and the assigning Lender thereunder shall, to the extent of the interest assigned by such Assignment and Assumption, be released from its obligations under this Agreement (and, in the case of an Assignment and Assumption covering all the assigning Lender's rights and obligations under this Agreement, such Lender shall cease to be a party hereto but shall continue to be entitled to the benefits of Sections 2.15, 2.16, 2.17 and 9.03). Any assignment or transfer by a Lender of rights or obligations under this Agreement that does not comply with this Section 9.04 shall be treated for purposes of this Agreement as a sale by such Lender of a participation in such rights and obligations in accordance with Section 9.04(c).

(d) The Administrative Agent, acting for this purpose as a non-fiduciary agent of the Borrower, shall maintain accessible at one of its offices a copy of each Assignment and Assumption delivered to it and a register for the recordation of the names and addresses of the Lenders, and the Commitment of, and principal amounts (and related stated interest amounts) of the Loans owing to, each Lender pursuant to the terms hereof from time to time (the "Register"). The entries in the Register shall be conclusive absent manifest error, and the Borrower, the Administrative Agent and the Lenders shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as a Lender and the owner of the amounts owing to it under the Loan Documents as reflected in the Register for all purposes of the Loan Documents, notwithstanding notice to the contrary. The Register shall be available for inspection by the Borrower and, with respect to itself, any Lender, at any reasonable time and from time to time upon reasonable prior written notice.

(i) Upon its receipt of a duly completed Assignment and Assumption executed by an assigning Lender and an assignee, the assignee's completed Administrative Questionnaire (unless the assignee shall already be a Lender hereunder) and all documentation and other information required by regulatory authorities under applicable "know your customer" and anti-money laundering rules and regulations, including, without limitation, the USA Patriot Act, the processing and recordation fee referred to in Section 9.04(b) and any written consent to such assignment required by Section 9.04(b), the Administrative Agent shall accept such Assignment and Assumption and record the information contained therein in the Register. No assignment shall be effective for purposes of this Agreement unless it has been recorded in the Register as provided in this paragraph.

(e) Any Lender may, without the consent of the Borrower or the Administrative Agent, sell participations to one or more banks or other entities (each a "Participant") in all or a portion of such Lender's rights and obligations under this Agreement (including all or a portion of its Commitment and the Loans owing to it), provided that (A) such Lender's obligations under this Agreement shall remain unchanged, (B) such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations and (C) the Borrower, the Administrative Agent and the other Lenders shall continue to deal solely and directly with such Lender in connection with such Lender's rights and obligations under this Agreement. Any agreement or instrument pursuant to which a Lender sells such a participation shall provide that such Lender shall retain the sole right to enforce this Agreement and to approve any amendment, modification or waiver of any provision of this Agreement or the other Loan Documents, provided that such agreement or instrument may provide that such Lender will not, without the consent of the Participant, agree to any amendment, modification or waiver described in the first proviso to Section 9.02(b) that requires the affirmative vote of such Lender. Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Borrower, maintain a register complying with the requirements of Sections 163(f), 871(h) and 881(c)(2) of the Code and the Treasury regulations issued thereunder on which it enters the name and address of each Participant and the principal and stated interest amounts of each Participant's interest in the Loans held by it (the "Participant Register"); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register to any person (including the identity of any Participant or any information relating to a Participant's interest in any Commitments, Loans or its other obligations under any Loan Document) except to the extent that such disclosure is necessary to establish that such Commitment, Loan or other obligation is in registered form under Section 5f.103-1(c) or Proposed Section 1.163-5(b) of the United States Treasury Regulations (or, in each case, any amended or successor version), or is otherwise required thereunder. The entries in the Participant Register shall be conclusive, absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such Loan or other obligation hereunder for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, the Administrative Agent (in its capacity as Administrative Agent) shall have no responsibility for maintaining a Participant Register. Subject to Section 9.04(f), the Borrower agrees that each Participant shall be entitled to the benefits of Sections 2.15, 2.16 and 2.17 to the same extent as if it were a Lender (subject to the requirements and limitations thereof, it being understood that the documentation required under Section 2.17(f) shall be delivered to the participating Lender) and had acquired its interest by assignment pursuant to Section 9.04(b). To the extent permitted by law, each Participant also shall be entitled to the benefits of Section 9.08 as though it were a Lender, provided such Participant agrees to be subject to Section 2.18(c) as though it were a Lender. For the avoidance of doubt, each Lender shall be responsible for the indemnity under Section 9.03(b) with respect to any payments made by such Lender to its Participant(s).

(f) A Participant shall not be entitled to receive any greater payment under Section 2.15 or 2.17 than the applicable Lender would have been entitled to receive with respect to the participation sold to such Participant, unless the sale of the participation to such Participant is made with the Borrower's prior written consent and the entitlement to receive a greater payments results from a Change in Law that occurs after the Participant acquired the applicable participation. A Participant that would be a Foreign Lender if it were a Lender shall not be entitled to the benefits of Section 2.17 unless the Borrower is notified of the participation sold to such Participant and such Participant agrees, for the benefit of the Borrower, to comply with Section 2.17(e) as though it were a Lender (it being understood that the documentation required under Section 2.17 shall be delivered to the participating Lender).

(g) Any Lender may at any time pledge, assign or grant a security interest in all or any portion of its rights under this Agreement to secure obligations of such Lender, including any pledge, assignment or grant to secure obligations to a Federal Reserve Bank, and this Section 9.04 shall not apply to any such pledge, assignment or grant of a security interest, provided that no such pledge, assignment or grant of a security interest shall release a Lender from any of its obligations hereunder or substitute any such pledge or assignee for such Lender as a party hereto.

SECTION 9.05. Survival. All covenants, agreements, representations and warranties made by the Loan Parties in the Loan Documents and in the certificates or other instruments delivered in connection with or pursuant to this Agreement or any other Loan Document shall have independent significance and be considered to have been relied upon by the other parties hereto and shall survive the execution and delivery of the Loan Documents and the making of any Loans, regardless of any investigation made by any such other party or on its behalf and notwithstanding that the Administrative Agent or any Lender may have had notice or knowledge of any Default or incorrect representation or warranty at the time any credit is extended hereunder, and shall continue in full force and effect as long as the principal of or any accrued interest on any Loan or any fee or any other amount payable under this Agreement is outstanding and unpaid. The provisions of Sections 2.15, 2.16, 2.17 and 9.03 and Article VIII shall survive and remain in full force and effect regardless of the consummation of the transactions contemplated hereby, the repayment of the Loans or the termination of this Agreement or any provision hereof.

SECTION 9.06. Counterparts; Integration; Effectiveness. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Agreement, the other Loan Documents and any separate letter agreements with respect to fees payable to the Administrative Agent constitute the entire contract among the parties relating to the subject matter hereof and supersede any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. Except as provided in Section 4.01, this Agreement shall become effective when it shall have been executed by the Administrative Agent and when the Administrative Agent shall have received counterparts hereof which, when taken together, bear the signatures of each of the other parties hereto, and thereafter shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or electronic transmission shall be effective as delivery of a manually executed counterpart of this Agreement.

SECTION 9.07. Severability. Any provision of this Agreement held to be invalid, illegal or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability without affecting the validity, legality and enforceability of the remaining provisions hereof; and the invalidity of a particular provision in a particular jurisdiction shall not invalidate such provision in any other jurisdiction.

SECTION 9.08. Right of Setoff. If an Event of Default shall have occurred and be continuing, each Lender and each of its Affiliates is hereby authorized at any time and from time to time, to the fullest extent permitted by law, to set off and apply any and all deposits (general or special, time or demand, provisional or final) at any time held and other obligations at any time owing by such Lender or Affiliate to or for the credit or the account of the Borrower against any of and all the obligations of the Borrower now or hereafter existing under this Agreement held by such Lender, irrespective of whether or not such Lender shall have made any demand under this Agreement and although such obligations may be unmatured; provided that if any Defaulting Lender shall exercise any such right of setoff, (i) all amounts so set off shall be paid over immediately to the Administrative Agent for further application in accordance with the provisions of this Agreement and, pending such payment, shall be segregated by such Defaulting Lender from its other funds and deemed held in trust for the benefit of the Administrative Agent and the

Lenders and (ii) the Defaulting Lender shall provide promptly to the Administrative Agent a statement describing in reasonable detail the obligations owing to such Defaulting Lender as to which it exercised such right of set off. The applicable Lender shall notify the Borrower and the Administrative Agent of such setoff or application, provided that any failure to give or any delay in giving such notice shall not affect the validity of any such setoff or application under this Section 9.08. The rights of each Lender under this Section 9.08 are in addition to other rights and remedies (including other rights of setoff) which such Lender may have.

SECTION 9.09. Governing Law; Jurisdiction; Consent to Service of Process.

(a) This Agreement shall be construed in accordance with and governed by the laws of the State of New York.

(b) The Borrower hereby irrevocably and unconditionally submits, for itself and its property, to the nonexclusive jurisdiction of the Supreme Court of the State of New York sitting in New York County and of the United States District Court of the Southern District of New York, and any appellate court from any thereof, in any action or proceeding arising out of or relating to any Loan Document, or for recognition or enforcement of any judgment, and each of the parties hereto hereby irrevocably and unconditionally agrees that all claims in respect of any such action or proceeding may be heard and determined in such New York State or, to the extent permitted by law, in such Federal court. Each of the parties hereto agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Nothing in this Agreement or any other Loan Document shall affect any right that the Administrative Agent, the Collateral Agent or any Lender may otherwise have to bring any action or proceeding relating to this Agreement or any other Loan Document against the Borrower or its properties in the courts of any jurisdiction.

(c) The Borrower hereby irrevocably and unconditionally waives, to the fullest extent it may legally and effectively do so, any objection that it may now or hereafter have to the laying of venue of any suit, action or proceeding arising out of or relating to this Agreement or any other Loan Document in any court referred to in Section 9.09(b). Each of the parties hereto hereby irrevocably waives, to the fullest extent permitted by law, the defense of an inconvenient forum to the maintenance of such action or proceeding in any such court.

(d) EACH PARTY TO THIS AGREEMENT IRREVOCABLY CONSENTS TO SERVICE OF PROCESS IN THE MANNER PROVIDED FOR NOTICES IN SECTION 9.01. NOTHING IN THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT WILL AFFECT THE RIGHT OF ANY PARTY TO THIS AGREEMENT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY LAW.

SECTION 9.10. WAIVER OF JURY TRIAL. EACH PARTY HERETO HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT, ANY OTHER LOAN DOCUMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 9.10.

SECTION 9.11. Headings. Article and Section headings and the Table of Contents used herein are for convenience of reference only, are not part of this Agreement and shall not affect the construction of, or be taken into consideration in interpreting, this Agreement.

SECTION 9.12. Confidentiality. Each of the Administrative Agent and the Lenders agrees to maintain the confidentiality of the Information (as defined below), except that Information may be disclosed (a) to its and its Affiliates' directors, trustees, officers, employees and agents, including accountants, legal counsel and other advisors (it being understood that the Persons to whom such disclosure is made will be informed of the confidential nature of such Information and instructed to keep such Information confidential), (b) to the extent requested by any regulatory authority or self-regulatory authority, (c) to the extent required by applicable laws or regulations or by any subpoena or similar legal process, (d) to any other party to this Agreement, (e) in connection with the exercise of any remedies hereunder or any suit, action or proceeding relating to this Agreement or any other Loan Document or the enforcement of rights hereunder or thereunder, (f) subject to an agreement containing provisions substantially the same as those of this Section 9.12, to (i) any assignee or pledgee of or Participant in, or any prospective assignee or pledgee of or Participant in, any of its rights or obligations under this Agreement or (ii) any actual or prospective counterparty (or its advisors) to any swap or derivative transaction relating to the Borrower and its obligations, (g) with the consent of the Borrower or (h) to the extent such Information (i) becomes publicly available other than as a result of a breach of this Section 9.12 or (ii) becomes available to the Administrative Agent or any Lender on a nonconfidential basis from a source other than the Borrower or any of their subsidiaries, provided that such source is not actually known by such disclosing party to be bound by an agreement containing provisions substantially the same as those contained in this Section 9.12. For the purposes of this Section 9.12, the term "Information" means all information received from the Borrower relating to the Borrower or its business, other than any such information that is available to the Administrative Agent or any Lender on a nonconfidential basis prior to disclosure by the Borrower, provided that, in the case of information received from the Borrower or any Subsidiary after the date hereof, such information is clearly identified at the time of delivery as confidential. Any Person required to maintain the confidentiality of Information as provided in this Section 9.12 shall be considered to have complied with its obligation to do so if such Person has exercised the same degree of care to maintain the confidentiality of such Information as such Person would accord to its own confidential information.

SECTION 9.13. Interest Rate Limitation. Notwithstanding anything herein to the contrary, if at any time the interest rate applicable to any Loan, together with all fees, charges and other amounts that are treated as interest on such Loan under applicable law (collectively, the "Charges"), shall exceed the maximum lawful rate (the "Maximum Rate") that may be contracted for, charged, taken, received or reserved by the Lender holding such Loan in accordance with applicable law, the rate of interest payable in respect of such Loan hereunder, together with all Charges payable in respect thereof, shall be limited to the Maximum Rate and, to the extent lawful, the interest and Charges that would have been payable in respect of such Loan but were not payable as a result of the operation of this Section 9.13 shall be cumulated and the interest and Charges payable to such Lender in respect of other Loans or periods shall be increased (but not above the Maximum Rate therefor) until such cumulated amount, together with interest thereon at the Federal Funds Rate to the date of repayment, shall have been received by such Lender.

SECTION 9.14. USA Patriot Act. Each Lender and each Agent hereby notifies the Borrower that pursuant to the requirements of the USA Patriot Act, it is required to obtain, verify and record information that identifies the Borrower, which information includes the name and address of the Borrower and other information that will allow such Person to identify the Borrower in accordance with the USA Patriot Act.

SECTION 9.15. Release of Collateral. Upon any sale or other transfer by any Loan Party of any Collateral that is permitted under this Agreement, or upon the effectiveness of any written consent to the release of the security interest granted hereby in any Collateral pursuant to Section 9.02 of this Agreement, the Mortgage or other security interest in such Collateral shall be automatically released and the Collateral Agent is authorized to, and shall, take any action to effect the foregoing, including, without limitation, executing and delivering to the Borrower, in recordable form, discharges and releases of such Mortgage or other security interest.

SECTION 9.16. Acknowledgement and Consent to Bail-In of Affected Financial Institutions. Notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any Lender that is an Affected Financial Institution arising under any Loan Document, to the extent such liability is unsecured, may be subject to the write-down and conversion powers of the applicable Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(a) the application of any Write-Down and Conversion Powers by the applicable Resolution Authority to any such liabilities arising hereunder which may be payable to it by any Lender that is an Affected Financial Institution; and

(b) the effects of any Bail-In Action on any such liability, including, if applicable:

(i) a reduction in full or in part or cancellation of any such liability;

(ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such Affected Financial Institution, its parent undertaking, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(iii) the variation of the terms of such liability in connection with the exercise of the write-down and conversion powers of the applicable Resolution Authority.

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ANNEX B

Schedule 2.01 to Credit Agreement

See attached.

Schedule 2.01

Term Loan Commitments

101

ANNEX C

Closing Checklist

See attached.

CERTAIN CONFIDENTIAL INFORMATION CONTAINED IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE TEMPUS LABS, INC. HAS DETERMINED THE INFORMATION (I) IS NOT MATERIAL AND (II) IS THE TYPE THAT TEMPUS LABS, INC. TREATS AS PRIVATE OR CONFIDENTIAL.

Master Agreement

This Master Agreement (inclusive of all Exhibits and Order Forms, the "Agreement") is entered into by and between Tempus Labs, Inc. (on behalf of itself and its affiliates, "Tempus"), and Recursion Pharmaceutical, Inc. ("Client" or "Recursion"). Tempus and Recursion are each individually a "Party" and are collectively the "Parties."

Background

Tempus is a technology company dedicated to advancing precision medicine through its proprietary products and services. Recursion would like to use Tempus' technology and data as further described in this Agreement.

Agreement

In consideration of the mutual promises described below, the Parties agree as follows:

1. **General**. During the Term, Tempus will provide "Services" and "Deliverables," each to the extent expressly identified in an Exhibit or fully executed Order Form under this Agreement. Tempus will also grant Client a license to certain "Licensed Data" or "Software," also to the extent included in an Exhibit or a fully executed "Order Form." The activities contemplated as of the date of this Agreement are described in the attached Exhibit(s), which may be supplemented by the Parties from time to time. Tempus will perform all Services in a professional and workmanlike manner using personnel appropriately skilled in the art of the requested Services.

2. **Fees**. Client agrees to pay Tempus all fees listed in the applicable Exhibit or Order Form. Invoices under this Agreement are due and payable by Client within thirty (30) days of the invoice date. Interest will apply to any undisputed, overdue invoices at a rate of the lesser of (a) 1.0% per month, and (b) the highest rate permitted by applicable law. Client is responsible for payment of any taxes arising out of or related to this Agreement.

3. **Insurance**. During the Term, each Party will maintain the following insurance at its own expense: (i) commercial general liability insurance with limits not less than $1 million per occurrence and $3 million annual aggregate; (ii) professional liability/errors and omissions insurance with limits not less than $1 million per occurrence and $2 million annual aggregate; and (iii) workers' compensation insurance at statutory limits (minimum $500,000). The insurance required above may be maintained through umbrella and/or self-insurance.

4. **Research Use Only**. Client agrees that unless otherwise specified in the applicable Exhibit or Order Form, information provided by Tempus under this Agreement is for research use and, as expressly set for herein, other Permitted Uses only. Client also agrees that: (a) Tempus does not recommend, endorse, or make any representation about the efficacy or appropriateness of any therapy, procedure, or treatment described in any report or information made available by Tempus; (b) if reports and information provided by Tempus are reviewed by a treating clinician, that clinician (and not Tempus) is responsible for decisions regarding patient care; and (c) Client is solely responsible for its use of reports and information made available by Tempus. All information and reports provided by Tempus are subject to any notes, explanations, limitations, and disclaimers included therein.

5. **Client's Policies**. Because Client is in the best position to interpret and apply its requirements and those of its affiliates, Client agrees that Client is solely responsible for complying with all such policies, rules, guidelines, and similar requirements, including, where applicable, requirements that govern research subject consent; the collection, processing, transfer, analysis, use, and storage of research subject specimens and data; and similar laws and regulations that apply to Client or its affiliates (collectively, "Client Requirements"). Client will only provide specimens and data to Tempus to the extent such transfer, and Tempus' use of the specimens and data in accordance with this Agreement, complies with Client Requirements. Tempus disclaims any responsibility and liability for any breach of Client Requirements.

6. **Privacy, Confidentiality, and Intellectual Property.**

   a. *Privacy*. If Client provides Tempus with protected health information (as defined in the Health Insurance Portability and Accountability Act of 1996 and its implementing regulations ("HIPAA")) ("PHI") under this Agreement, the Parties will enter into a business associate agreement, which will be deemed incorporated into this Agreement.

   b. *Non-disclosure*. Any non-public information provided by a Party (the "Disclosing Party") to the other Party (the "Receiving Party") in connection with this Agreement, including specific terms and pricing, is the Disclosing Party's "Confidential Information." During the Term and the subsequent three (3) year period, the Receiving Party will maintain all Confidential Information in confidence and use it only as reasonably necessary to perform its obligations and exercise its rights under this Agreement. Confidential Information excludes information that (i) is publicly available through no fault of the Receiving Party or anyone to whom the Receiving Party made such information available; (ii) was lawfully obtained by the Receiving Party on a non-confidential basis from a third party; (iii) the Receiving Party can conclusively demonstrate was legally in its possession before the Disclosing Party provided it to the Receiving Party; or (iv) was independently developed by the Receiving Party or on its behalf without the use of any information provided to the Receiving Party by the Disclosing Party. In addition and notwithstanding anything to the contrary, the De-Identified Data (defined below) and any aggregated or otherwise de-identified data stored in Tempus' technology platform is not Client's Confidential Information under this Agreement.

   c. *Intellectual Property*. Except to the extent expressly stated otherwise, this Agreement does not grant either Party a license to or any right in the other Party's intellectual property. Without limiting the generality of the foregoing, Tempus reserves all rights in Tempus Materials, during the Term and otherwise. "Tempus Materials" means any data, technology, software, formulas, techniques or know-how and other tangible and intangible items that are owned or created by Tempus, and "Recursion Materials" means any data, technology, software, formulas, techniques or know-how and other tangible and intangible items that are owned or created by Recursion. Tempus will be and remain, at all times, the sole owner of the Tempus Materials, including any replacements, improvements, updates, enhancements, derivative works, and other modifications to the same. Recursion will be and remain, at all times, the sole owner of the Recursion Materials, including any replacements, improvements, updates, enhancements, derivative works, and other modifications to the same. Recursion will also own its copy of items provided under this Agreement that are expressly described as Deliverables in the applicable Exhibit or Order Form. For clarification, Licensed Data shall be considered Tempus Materials and never a Deliverable. Tempus Materials shall not include End User Generated Results, as defined in Exhibit 1, or other any other Recursion Materials.

d. *Data*. In service of Tempus' mission to advance precision medicine, Tempus makes use of de-identified data to facilitate innovation in therapies and patient care and to continuously improve its technology, computational and predictive models, and other products and services. Accordingly, except as stated otherwise in an Exhibit or Order Form, Tempus may retain a de-identified copy of all Deliverables generated by and clinical data made available to Tempus under this Agreement (collectively, the "De-Identified Data"). To the extent necessary, Tempus will de-identify such data in accordance with HIPAA, and for purposes of this Agreement, genomic sequencing data without other identifiers is not considered identifiable. Tempus owns the De-Identified Data and may use and share it for any purposes permitted under applicable law.

7. Indemnification.

a. *Mutual*. Each Party will defend, indemnify, and hold harmless the other Party, its board, officers, employees, suppliers, agents, successors, and assigns from and against any costs, losses, damages, liabilities, expenses, demands and judgments, including court costs and attorney fees (collectively, "Losses") that arise out of a third party claim based on the negligent acts or willful misconduct of the indemnifying Party's employees or agents that directly cause bodily injury or tangible property damage, if the injury or damage directly arises out of performance of this Agreement.

b. *By Tempus*. Tempus will defend, indemnify, and hold Client, its board, officers, employees, suppliers, agents, successors, and assigns harmless from and against any Losses that arise out of a third party claim alleging that the Tempus Materials used in providing the Services or any Software, Licensed Data or Deliverable directly infringes a copyright, a U.S. patent issued as of the Effective Date, or any third party trademark or violates applicable law. Tempus' obligations under this Subsection are Client's sole and exclusive remedy and Tempus' sole obligation for any alleged infringement of intellectual property. Tempus does not have any obligations under this Subsection for claims of infringement or misappropriation based upon or arising out of: (i) any Licensed Data, Deliverable, Software, or Tempus Materials modified without Tempus' approval; (ii) the use of any Licensed Data, Deliverable, Software, or Tempus Materials in combination with materials not provided by Tempus; or (iii) the use of any Licensed Data, Deliverable, Software, or Tempus Materials other than as permitted under this Agreement.

c. *By Client*. Client will defend, indemnify, and hold Tempus, its directors, officers, employees, suppliers, agents, successors, and assigns harmless from and against any Losses that arise out of a third party claim regarding its use of any Services, Software, Licensed Data, or Deliverables.

d. *Process*. The indemnification obligations in this Section are subject to the "Indemnified Party": (i) giving prompt notice to the "Indemnifying Party" of the claim for which indemnification is sought; (ii) reasonably cooperating in its defense; and (iii) granting the Indemnifying Party control over its defense and settlement. Any delay in notice will only excuse the Indemnifying Party's obligations under this Section to the extent its defense of the claim is adversely affected. The Indemnifying Party will not agree to any finding of fault, action, or forbearance by the Indemnified Party without its advance written consent.

8. Limitations. UNDER NO CIRCUMSTANCES WILL EITHER PARTY BE LIABLE FOR ANY SPECIAL, INCIDENTAL, EXEMPLARY, CONSEQUENTIAL, PUNITIVE, OR OTHER INDIRECT DAMAGES SUFFERED BY THE OTHER OR ANY OTHER PERSON ARISING FROM OR RELATED TO THIS AGREEMENT OR ANY SERVICES OR ACTIVITIES HEREUNDER, REGARDLESS OF WHETHER THE PARTY WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR THEY WERE OTHERWISE FORESEEABLE. IN ADDITION, UNDER NO CIRCUMSTANCES WILL TEMPUS OR CLIENT BE LIABLE FOR ANY

INDIVIDUAL CLAIM, OR IN THE AGGREGATE FOR ALL CLAIMS, FOR ANY AMOUNT IN EXCESS OF THE GREATER OF THE FEES PAID BY CLIENT TO TEMPUS UNDER THIS AGREEMENT OR ONE HUNDRED THOUSAND DOLLARS ($100,000). THE LIMITATIONS SET FORTH IN THIS SECTION DO NOT APPLY TO EITHER PARTY'S PAYMENT OR INDEMNIFICATION OBLIGATIONS. TEMPUS DISCLAIMS ALL WARRANTIES AND REPRESENTATIONS NOT EXPRESSLY SET FORTH IN THIS AGREEMENT.

9. Term and Termination.

a. *Term*. This Agreement is effective as of the Effective Date and will continue until the date that is five (5) years after the Effective Date (the "Term"). Sections 4-10 will survive termination of this Agreement.

b. *Termination*. Either Party may terminate this Agreement if the other has committed a material breach that is not cured to the reasonable satisfaction of the non-breaching Party within thirty (30) days of receipt of written notice from the non-breaching Party. In addition, after the first three (3) years of the Term, Client may terminate this Agreement at its convenience and at any time by providing at least ninety (90) days written notice to the other Party, however, such termination will not apply to any ongoing Order Form(s) unless otherwise mutually agreed by the Parties, and applicable terms of the Agreement will survive until the surviving Order Form(s) are completed or terminated. In the event of such termination for convenience by the Client, Client will pay to Tempus an amount equal to (a) $[***] per unique record of Downloaded Data that Client has downloaded prior to termination less (b) the sum of any Annual License Fees paid prior to termination (the "Early Termination Fee"). [***].

c. *Regulatory Changes*. If either Party (the "Noticing Party") determines in good faith that a change in applicable law or regulation, or a change in how a current law or regulation is interpreted, (i) makes any part of this Agreement illegal or unenforceable, or (ii) materially changes the economic benefit or cost of performing this Agreement, then the Noticing Party will provide the other Party with a proposed amendment to this Agreement to address such change. The Parties will negotiate such amendment in good faith. If the Parties are unable to reach agreement within thirty (30) days of the initial notice, this Agreement will continue; provided that provisions materially impacted by the change in law or regulation (or interpretation thereof) shall be null and void, but only if such provisions are severable from the Agreement in a manner that does not materially impact the cost of performance or the economic benefit of the Agreement to either Party; if such condition is not met, the Agreement will terminate upon the expiration of such notice if the parties do not enter into a fully executed amendment addressing the matter. No liability will accrue to either Party for failure to perform under this Agreement during the period between notice under this Subsection and the earlier of (x) any amendment to or termination of this Agreement and (y) the expiration of such thirty (30)-day period.

d. *Termination Upon Bankruptcy, Insolvency and the Like*. Subject to applicable bankruptcy and insolvency laws, if either party (i) ceases the active conduct of business; (ii) voluntarily becomes subject to a bankruptcy or insolvency proceeding under federal or state statute; (iii) has filed against it an involuntary petition for bankruptcy that is not dismissed within sixty (60) days of filing; (iv) becomes insolvent or subject to direct control by a trustee, receiver, or similar authority; or (v) winds up or liquidates its business, voluntarily or otherwise, then the other party may, at its sole option, terminate this Agreement immediately upon written notice to the first party. All rights and licenses granted by Tempus to Client under or pursuant to any section of this Agreement are, and will otherwise be deemed to be, for purposes of Section 365(n) of the U.S. Bankruptcy Code, and other similar laws in any jurisdiction (collectively, with similar laws in which such sections appear,

the "Bankruptcy Laws"), nonexclusive licenses of rights to "intellectual property" as defined under the Bankruptcy Laws. The parties will retain and may fully exercise all of their respective rights and elections under the Bankruptcy Laws. All rights, powers and remedies of the parties as provided herein are in addition to and not in substitution for any and all other rights, powers and remedies now or hereafter existing at law or in equity (including the Bankruptcy Laws) in the event of the commencement of a case by or against the other party under the Bankruptcy Laws.

10. Miscellaneous.

a. *Governing Law and Disputes*. This Agreement will be governed exclusively by the laws of Illinois, without regard to its conflict of law principles. The parties consent to exclusive jurisdiction and venue of the federal and state courts in Cook County, Illinois. The Parties will use good faith efforts to work together to resolve any disputes related to this Agreement, using mutually escalating discussions as needed.

b. *Force Majeure*. Neither Party will be liable for any failure or delay of performance to the extent resulting from a cause outside of its reasonable control, such as natural disaster, strike, fire, pandemic, governmental action, terrorism, or war.

c. *Anti-Corruption*. Neither Party has received or been offered any illegal or improper payment, bribe, kickback, gift, or other item of value from an employee or agent of the other Party in connection with this Agreement. The Parties intend for their relationship and interactions under this Agreement to comply with the following: (i) the federal anti-kickback statute (42 U.S.C. § 1320a-7b(b)) and the associated safe harbor regulations; and (ii) the limitation on certain physician referrals (Stark Law) (42 U.S.C. § 1395nn). Accordingly, no part of any remuneration provided under this Agreement or any other agreement between the Parties is a prohibited payment in exchange for recommending or arranging for the referral of business or the ordering of items or services, or otherwise intended to induce illegal referrals of business.

d. *Exclusion and Debarment*. As of the date of this Agreement and to the best of Tempus' knowledge, neither Tempus nor any Tempus personnel providing Services under this Agreement: (i) have been the subject of a debarment proceeding under 21 U.S.C. § 335a; (ii) are excluded from participation in Medicare, Medicaid, or any other federal or state health care program; or (iii) are the subject of any government investigation that could result in such debarment or exclusion. If Tempus becomes aware of such an event during the Term with respect to Tempus personnel, it will promptly terminate its relationship with the affected personnel or remove them from providing Services to Client. If Tempus becomes aware of such an event with respect to itself during the Term, it will promptly inform Client, and Client may immediately terminate this Agreement.

e. *Notice*. Notice required under this Agreement will be in writing, delivered to the address for each Party listed above, and clearly identifiable as a legal notice. Client will designate its billing contact and invoice address, and any subsequent changes to such information, by email to billing@Tempus.com. All notices to Tempus should be sent to legal@tempus.com.

f. *Binding Effect; Assignment*. This Agreement is binding upon, and will inure to the benefit of, the successors and permitted assigns of the Parties. Either Party may assign its rights and responsibilities under this Agreement to any of its affiliates or in connection with a merger, acquisition, corporate reorganization or sale of all or substantially all of its assets; provided, in the case of such an assignment by Tempus, Tempus provides within reasonable amount of time written notice to Client of any such permitted assignment and the assignee agrees in writing to be bound by the terms and conditions of this Agreement, including without limitation with respect to

permitting Client to download, store, copy, use, compile, display, and access the Licensed Data, in each case in accordance with the rights and licenses set forth herein; and further provided, in the case of such an assignment by Recursion, the assignee agrees in writing to be bound by the terms and conditions of this Agreement, and also provided that Recursion may not assign this Agreement if the assignee is a Top 20 pharmaceutical company based on annual revenues for the trailing 12 months prior to assignment (each, a "Top 20 Pharma Company"), without the prior written consent of Tempus, not to be unreasonably withheld. If Tempus withholds its consent to a proposed assignment of this Agreement by Recursion to a Top 20 Pharma Company, Recursion shall have the right to terminate this Agreement upon thirty (30) days prior written notice to Tempus and payment of the Early Termination Fee, minus a [***] discount. Any other purported assignment is void.

g. *Subcontracting*. Tempus may subcontract certain of its rights and obligations under this Agreement. Any Tempus subcontractor is subject to the terms of this Agreement that would otherwise apply to Tempus, and Tempus is responsible for the acts and omissions of its subcontractor to the same extent as it is responsible for its own acts and omissions.

h. *Use of Name and Marks*. To the extent legally required and subject to redaction of information that is not required to be disclosed (e.g., detailed pricing), each Party has the right to make public statements regarding the existence of this Agreement and an accurate description of the Services without the consent of the other Party. Neither Party may use the other Party's name or marks for any other purpose without the other Party's advance written consent. Any approved use of the other Party's logo must be in the approved form and subject to any usage guidelines provided by the other Party.

i. *Relationship of the Parties*. The Parties are independent contractors. This Agreement does not create a partnership, franchise, joint venture, agency, fiduciary, or employment relationship between the Parties.

j. *Entire Agreement; Amendments and Waivers*. This Agreement, which includes all Exhibits and fully executed Order Forms, and amendments, is the entire understanding between the Parties on its subject matter and supersedes all prior or contemporaneous discussions, representations, and agreements, oral or written, between the Parties. Subject to Section 1 of the Agreement, Tempus shall accept any Client purchase orders made in accordance with this Agreement; provided any additional or inconsistent terms or conditions of any such purchase orders or similar standardized form given or received pursuant to this Agreement shall not be binding on Tempus and are hereby excluded. There are no third party beneficiaries to this Agreement. If any provision in this Agreement is held invalid or unenforceable, the remainder of the Agreement will remain enforceable to the fullest extent permitted by law, so long as such change does not materially change the cost or benefit of the Agreement to a Party. Any term or provision of this Agreement may be amended, and the observance of any term of this Agreement may be waived, only by a writing signed by the Parties. Failure to enforce any term of this Agreement is not a waiver. The terms of any Exhibit or fully executed Order Form will supersede the body of this Agreement to the extent necessary to address a direct conflict.

k. *Counterparts*. This Agreement may be executed in any number of counterparts, each of which is deemed an original and all of which taken together constitute the Agreement.

This Agreement is effective as of the date of the last signature by the Parties below (the "Effective Date").

Recursion Pharmaceuticals, Inc.

/s/ Christopher Gibson
Name: Christopher Gibson
Title: CEO

Date: 11/3/2023

Tempus Labs, Inc.

/s/ Jim Rogers
Name: Jim Rogers
Title: Treasurer and Chief Financial Officer

Date: 03-Nov-2023

Exhibit 1
Licensed Data Terms

1. Definitions.

a. "Affiliate" means a legal entity that is controlled by or under common control with the Party, where "control" means possession, directly or indirectly, of the power to direct the Party's management or policies, whether through the ownership of voting securities, by contract, or otherwise.

b. "Analytical Services Results" means Results created by Tempus pursuant to an Order Form.

c. "Authorized Users" means employees or contractors of Client or Client's Affiliates who are authorized by Client or Client's Affiliates to access and use the Services or Licensed Data subject to all applicable terms of this Agreement.

d. "Covered Recipient" means a physician licensed to practice in the U.S. or a U.S. teaching hospital.

e. "End User Generated Results" means Results created by Client (including by an Authorized User) based, in whole or in part, on Permitted Uses of Licensed Data.

f. "Licensed Data" means a subset or cohort of Tempus's proprietary database of de-identified clinical and molecular data that is transferred from Tempus to Recursion pursuant to the terms and conditions set forth herein, including Downloaded Data (as defined in Section 4(b) of this Exhibit).

g. "License Term" means (i) with respect to Downloaded Data, the Evaluation Period, and (ii) with respect to other Licensed Data licensed pursuant to Sections 4(c)-(d) of this Exhibit, the duration of time listed in an Order Form during which Client maintains a license to such other Licensed Data.

h. "Payment or Transfer of Value" means a payment or transfer of value as defined in the U.S. Physician Payment Sunshine Act (42 USC § 1320a-7h(e)) and implementing regulations (42 CFR § 403.900 et seq.).

i. "Permitted Uses" means any use allowed under applicable law that is for Client's or its Affiliates' therapeutic product development purposes (including use by Client or its Affiliates in conjunction with a third party collaboration for such purpose, where Recursion is financially at risk (e.g. future payments are contingent) and meaningfully participating in the joint therapeutic product development project) and consistent with this Agreement. Permitted Uses include Client's use of Licensed Data for Client to develop, train, improve, modify, and create derivative works of Client's and its Affiliates' machine learning/artificial intelligence ("AI/ML") models solely for purposes of therapeutic product development ("Models"), Client's development of embeddings data, training data, and test data for the Models (provided such data does not involve any impermissible use, Reproduction, or retention of the Licensed Data), and Client's use, deployment, commercialization or licensing of the Models, in all cases, subject to all terms and limitations of the Agreement. Notwithstanding anything to the contrary, Permitted Uses exclude any use of Licensed Data or Results (collectively, the "Permitted Uses Exclusions"):

    i. to design, develop, or produce any diagnostic product or service (including any algorithmic diagnostic product or service) other than companion diagnostic products or services for therapeutic products under development either by or on behalf of Client or its Affiliates or Client in collaboration with a third party,

ii. in service of a third party collaboration where (a) the primary purpose of such collaboration is to provide access to, or Results from use of, Licensed Data, (b) Client charges a fee or requires any other exchange of value as consideration for access to Licensed Data, or (c) Licensed Data is used by or on behalf of a third party for purposes independent of or unrelated to (i) therapeutic product development purposes by Client, or (ii) a collaboration between a third party and Client on a joint therapeutic product development project, or

iii. to provide services to a third party for its therapeutic product development, pursuant to an arrangement in which Client is compensated primarily on a fee-for-service or similar basis.

The Permitted Uses and Permitted Uses Exclusions will survive termination of the Agreement.

k. "Reproduction" and variations thereof means any reproduction, display, disclosure, or publication of the Licensed Data other than in accordance with the Permitted Uses and all terms of the Agreement. Reproduction and variations thereof also include (i) any copies, excerpts, extracts, or mere translations of the Licensed Data, and (ii) data or information generated through use of a large language model or other AI/ML technology where the end result would allow a user to access or query the Licensed Data directly or would materially serve as a substitute for such access. For clarity, the immediately preceding sentence does not prohibit an Authorized User from accessing or querying downloaded copies of the Licensed Data in the Recursion Environment per Section 4(b) – (c).

l. "Results" means analyses, summaries, reports, visualizations, information, data, applications, models, and software, excluding diagnostic products or services (including diagnostic software and algorithms) other than as expressly permitted under the definition of "Permitted Uses" above, created with or based on Licensed Data during the License Term, including improvements, enhancements modifications, and derivative works thereof, so long as such Results do not represent a Reproduction of the Licensed Data.

2. License Grants.

a. *Licensed Data*. Subject to the terms and conditions herein and the Master Agreement (including payment of all fees), Tempus grants Client a limited, non-exclusive, revocable, non-transferable, right and license, without right of sublicense, which may be exercised through Authorized Users, to download, store, copy, use, compile, display, and access the cohort of Licensed Data, or compilations based upon such Licensed Data, only for Permitted Uses during the License Term. Client will ensure that any Reproduction by Client from the use of Licensed Data (or Reproduction of the Licensed Data itself) will include attribution to Tempus (for example, with Tempus' logo) with respect to the use and involvement of the Licensed Data obtained from Tempus (or its licensors) and any mutually agreed proprietary rights and disclaimer language with respect to the Licensed Data.

b. *Analytical Services*. To the extent documented in an Order Form, Tempus will grant Client a limited, non-exclusive, irrevocable, transferable, perpetual license, with the right to sublicense, to use Analytical Services Results for any lawful purpose.

c. *End User Generated Results*. To the extent Client creates End User Generated Results during the License Term, Client shall own such End User Generated Results and may continue using the End User Generated Results for Permitted Uses following the expiration or termination of the License Term, so long as such End User Generated Results do not Reproduce the Licensed Data.

3. **Licensed Data Services**. Tempus can provide certain Services to assist Client with using, accessing, and understanding the Licensed Data. Tempus will provide the Licensed Data Services described below in an amount (or for the duration) set forth in an Order Form executed by the parties (unless otherwise specified below):

   a. *Technical Services*. Technical Services help Client understand, access, and use the Licensed Data, including training, technical support, implementation guidance, and troubleshooting. Tempus will provide sufficient Technical Services during the Term to enable Recursion to use and access Licensed Data.

   b. *Analytical Services*. Analytical Services help Client process, examine, analyze, summarize, visualize, and report on the Licensed Data. Tempus leverages its existing technology and know-how to provide Analytical Services to surface factual insights that already exist within the Licensed Data. TEMPUS WILL NOT PROVIDE ANALYTICAL SERVICES UNDER THIS AGREEMENT UNLESS AND UNTIL APPROVED BY TEMPUS IN A SEPARATE MUTUALLY AGREED UPON WORK ORDER.

   c. *Strategic Collaboration Services*. Strategic Collaboration Services are designed to combine the Licensed Data with each Party's existing technology and know-how to identify new technologies, develop new products, and/or bring new products to market. Unlike Technical Services and Analytical Services, Strategic Collaboration Services must be subject to a separate agreement that sets forth, at a minimum, the Parties' respective obligations, any fees associated with the Strategic Collaboration Services, and the Parties' respective intellectual property rights regarding the results of the Strategic Collaboration Services. TEMPUS WILL NOT PROVIDE STRATEGIC COLLABORATION SERVICES UNDER THIS AGREEMENT UNLESS AND UNTIL APPROVED IN A SEPARATE MUTUALLY AGREED UPON WORK ORDER.

4. **Implementation of Licensed Data Terms.**

   a. *Recursion Environment.* Following the Effective Date, Recursion will establish, to the extent not already established, a secure environment (the "Recursion Environment"), which will be subject to industry best-practices technical and administrative security safeguards, to enable Recursion to carry out the Permitted Use activities described in this Exhibit, including accessing the Downloaded Data and for Permitted Uses. Recursion may store data, information, tools, software, and other materials other than the Licensed Data ("Additional Data") in the Recursion Environment to carry out the Permitted Use activities described in this Exhibit. The parties agree that such Additional Data constitutes the Confidential Information of Recursion and Recursion Materials. Recursion is and shall continue to cover all associated costs of the Recursion Environment.

   b. *Recursion Right to Download De-Identified Records*. Recursion will license Lens pursuant to a separate Subscription Agreement (see Exhibit 2, attached hereto). Recursion will use Lens to identify de-identified records that may be of interest to Recursion. Recursion will be permitted to download to the Recursion Environment up to a maximum of [***] de-identified records at any one time (the "Downloaded Data"). Recursion may not exceed [***] downloaded records of Downloaded Data at any one time (the "Downloaded Data Cap"). If Recursion wants to exceed [***] records, it must return an equal number of records of Downloaded Data so that the maximum number of records of Downloaded Data in the Recursion Environment at any time does not exceed [***]. Additionally, Recursion will not be permitted to access more than an aggregate total of [***]

unique records of Downloaded Data during the Term (collectively, the "Multi-Modal Record Category"), unless otherwise agreed upon by the Parties. [***]. Upon request of Downloaded Data files, Tempus will deliver the requested files as promptly as possible [***]. Tempus will provide Client with reasonable filtering parameters that will facilitate compliance with the timeline described in the immediately preceding sentence.

c. *Evaluation Period for De-Identified Records*. Recursion may download Downloaded Data for a period of 180 days from the date of download (the "Evaluation Period"). At the end of the 180-day Evaluation Period, Recursion must either return the Downloaded Data to Tempus or license them pursuant to an Order Form and the terms and conditions set forth herein. In all instances, the License Term for use of the Downloaded Data will terminate upon any termination or expiration of the Agreement.

d. *Transfer of De-Identified Records*. If Recursion elects to license the records, it will be permitted to transfer the files outside of the Recursion Environment and into any other secured repository subject to (i) Tempus' express written consent (such consent not to be unreasonably withheld), and (ii) the terms and conditions set forth herein. Recursion will indicate its interest to license the records by providing written notice to Tempus prior to the expiration of the Evaluation Period. Any de- identified record transferred to Recursion pursuant to this Section shall be considered Licensed Data.

e. *License Term for De-Identified Records*. Subject to the terms of the applicable Order Form and this Agreement, Recursion will be permitted to retain each Licensed Data record it elects to license pursuant to Sections 4(d) of this Exhibit until the later to occur of (i) five years, or (ii) the date on which the applicable Licensed Data record no longer has a regulatory use for a therapeutic in development by Client (the "Licensed Record Term"). At the conclusion of the Licensed Record Term, Recursion will return or destroy the record and all Reproductions thereof and certify such return or destruction in writing.

f. *Maximum Number of De-Identified Records*. During the Term, Recursion will be entitled to license up to a maximum of [***] Licensed Data records in the aggregate pursuant to Sections 4(c)-(d). Tempus, in its sole discretion, will determine whether Recursion will be permitted to exceed [***] Licensed Data records during the Term.

5. Compensation.

a. *Per De-Identified Record Fee*. For each Licensed Data record licensed pursuant to Sections 4(c)-(d) of this Exhibit, Recursion will pay Tempus an annual license fee [***].

b. *Annual License Fee.* Promptly after the Effective Date, Tempus will invoice Recursion for the first annual license fee hereunder, in an amount equal to $22,000,000 (the "Initial License Fee"). In addition, during the Term, Tempus will invoice Recursion for subsequent annual license fees during the Term, as follows: (i) $22,000,000 on the first anniversary of the Effective Date (ii) $32,000,000 on the second anniversary of the Effective Date and (iii) $42,000,000 on each of the third anniversary of the Effective data and the fourth anniversary of the Effective Date (each such license fee, the "Annual License Fee"). The Initial License Fee and each Annual License Fee shall be payable at Recursion's option either in the form of (x) cash, (y) shares of Class A Common Stock of Recursion, par value of $0.00001 per share ("Recursion Class A Common Stock"), or (z) a combination of cash and shares of Recursion Class A Common Stock in such proportion as is determined by Recursion in its sole discretion; provided that (a) the aggregate number of shares of Recursion Class A Common Stock that Recursion may issue in connection with all payments under

this Agreement shall not exceed the Share Maximum and (b) all or any portion of the Initial License Fee or any Annual License fee shall be payable in the Form of Recursion Class A Common Stock only if (i) all representations and warranties of Recursion set forth in Section 5.c. below are true and correct in all material respects (other than representations and warranties that are qualified as to "materiality," which representations and warranties shall be true and correct in all respects) at and as of the date on which such fee is paid as though made on such date, (ii) Recursion has obtained any and all consents, permits, approvals, registrations and waivers necessary for the issuance of such shares of Recursion Class A Common Stock, all of which are in full force and effect, and (iii) Recursion has filed with Nasdaq a Notification Form: Listing of Additional Shares for the listing of such shares of Recursion Class A Common Stock. In the event that all or any portion of the Initial License Fee or any Annual License Fee shall be payable in the form of Recursion Class A Common Stock, Recursion shall, subject to the Share Maximum, issue to Tempus a number of shares of Recursion Class A Common Stock equal to (1) the amount of such fee divided by (2) the VWAP of Recursion Class A Common Stock for the seven (7) Trading Day period ending on the Trading Day immediately preceding (and including) the date that is five (5) business days before the date on which such fee is paid. Any shares of Recursion Class A Common Stock issued to Tempus hereunder shall be delivered via book-entry record through the Transfer Agent and, as soon as practicable thereafter, Recursion shall provide a copy of the records of the Transfer Agent showing Tempus as the owner of such shares of Recursion Class A Common Stock.

For purposes of this Section 5.b., the following terms have the following meanings:

"Share Maximum" means a number of shares of Recursion Class A Common Stock equal to 19.9% of the sum of the total number of shares of Recursion Class A Common Stock and Class B Common Stock of Recursion, par value of $0.00001 per share, collectively, that are outstanding as of (a) the close of business on the date immediately preceding the date of this Agreement or (b) the close of business on the date immediately preceding the date any shares of Recursion Class A Common Stock are issued to Tempus pursuant to this Agreement, whichever is less.

"Trading Day" means any day on which Recursion Class A Common Stock is traded on The Nasdaq Global Select Market, or, if The Nasdaq Global Select Market is not the principal trading market for Recursion Class A Common Stock as such time, then on the principal securities exchange or securities market on which Recursion Class A Common Stock is then traded.

"Transfer Agent" means the transfer agent for the Recursion Class A Common Stock.

"VWAP" means, with respect to any multi-day period, the dollar volume-weighted average price for Recursion Class A Common Stock on the principal securities exchange or securities market on which it is then traded during the period beginning at 9:30:01 a.m., New York time (or such other time as such market publicly announces is the official open of trading) on the first day of such multi-day period and ending at 4:00:00 p.m., New York time (or such other time as such market publicly announces is the official close of trading) on the last day of such multi-day period, as reported by Bloomberg through its "HP" function (set to weighted average) or, if the foregoing does not apply, the dollar volume-weighted average price of Recursion Class A Common Stock in the over-the-counter market on the applicable electronic bulletin board during the period beginning at 9:30:01 a.m., New York time on the first day of such multi-day period and ending at 4:00:00 p.m., New York time on the last day of such multi-day period, as reported by Bloomberg, or, if no dollar volume-weighted average price is reported by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of Recursion Class A Common Stock of any of the market makers as reported by OTC Markets Group Inc. during such multi-day period. If the VWAP cannot be calculated for multi-day period on any of

the foregoing bases, the VWAP shall be the fair market value per share of Recursion Class A Common Stock at the end of such multi-day period as mutually agreed by Tempus and Recursion. If Tempus and Recursion are unable to reach such mutual agreement on the fair market value per share of Recursion Class A Common Stock within twenty (20) days after any amount Recursion has determined to pay in shares of Recursion Class A Common Stock becomes payable, Recursion shall pay such amount to Tempus in cash.

c. *Representations and Warranties of Recursion*. Recursion hereby represents and warrants to Tempus as of the date of this Agreement and as of each date that all or any portion of the Initial License Fee or any Annual License Fee is paid in the form of Recursion Class A Common Stock that:

i. Any shares of Recursion Class A Common Stock issued to Tempus pursuant to this Section 5 (any such shares actually issued to Tempus pursuant to this Section 5, the "Issued Recursion Shares"), when issued, will be (A) duly and validly authorized, fully paid and nonassessable, (B) will be free and clear of all encumbrances and transfer restrictions imposed by Recursion, except for restrictions imposed by applicable securities laws, and, (C) subject to the accuracy of the representations and warranties of Tempus in Section 5.d. below and compliance by Tempus with applicable federal and state securities laws with respect to such issuance, will be issued in compliance with all applicable federal and state securities laws;

ii. The issuance of the Issued Recursion Shares will not (A) conflict with or result in a breach or violation of any material agreement or instrument to which Recursion is a party; (B) result in any violation of the provisions of the certificate of incorporation or bylaws of Recursion; or (C) result in any violation of any statute or any judgment, order, rule or regulation of any court or governmental agency or body, domestic or foreign, having jurisdiction over Recursion or any of its properties;

iii. The issuance of the Issued Recursion Shares requires no consent of, action by or in respect of, or filing with, any person, governmental body, agency, or official, including, without limitation, any consent, action by, or approval of shareholders of the Company, other than (A) filings that have been made pursuant to applicable state securities laws, (B) post-sale filings pursuant to applicable state and federal securities laws, and (C) filings pursuant to the rules and regulations of the Nasdaq Stock Market LLC ("Nasdaq"), each of which Recursion has filed or undertakes to file within the applicable time, and (D) filings required to be made by, or consents or action required to be obtained by, Tempus or its affiliates;

iv. Recursion has timely filed all reports, schedules, forms, statements and other documents required to be filed by Recursion under the Securities Act of 1933, as amended (the "Securities Act"), and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including pursuant to Section 13(a) or 15(d) thereof (collectively, the "SEC Filings"). At the time of filing thereof, the SEC filings complied in all material respects with the requirements of the Securities Act or the Exchange Act, as applicable, and the rules and regulations of the U.S. Securities and Exchange Commission (the "SEC") thereunder;

v. The issued and outstanding shares of Recursion Class A Common Stock are registered pursuant to Section 12(b) of the Exchange Act and are listed for trading on Nasdaq under the symbol "RXRX." Recursion is in compliance with applicable Nasdaq continued listing requirements;

vi. Assuming the accuracy of the representations and warranties of Tempus set forth in Section 5.d. below and compliance by Tempus with applicable federal and state securities laws with respect to such issuance, no registration under the Securities Act is required for the issuance of the Issued Recursion Shares by Recursion to Tempus;

vii. Recursion is not an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

d. *Private Placement of Recursion Class A Common Stock*. The parties hereto hereby agree that any shares of Recursion Class A Common Stock issuable to Tempus pursuant to this Section 5 will be issued pursuant to one or more exemptions from registration pursuant to Section 4(a)(2) of the Securities Act and/or under Regulation D of the Securities Act and the exemption from qualification under applicable state securities laws. Tempus shall reasonably assist Recursion as may be necessary to comply with the securities and blue sky laws relating to the shares of Recursion Class A Common Stock issuable to Tempus pursuant to this Section 5. In connection with each issuance of shares of Recursion Class A Common Stock pursuant to this Section 5, Tempus represents and warrants as of the time of each such issuance that Tempus (i) is a "qualified institutional buyer" (as defined in Rule 144A under the Securities Act) or an institutional "accredited investor" as that term is defined in Rule 501(a) under Regulation D promulgated pursuant to the Securities Act; (ii) is acquiring such shares for its own account solely for investment purposes and not with a view towards, or for offer or sale in connection with, any distribution or dissemination thereof; (iii) has no present arrangement to sell such shares to or through any person or entity and understands that such shares must be held indefinitely unless such shares are resold pursuant to a registration statement under the Securities Act or an exemption from registration is available; (iv) is a sophisticated investor with the requisite knowledge and experience in financial and business matters to be capable of evaluating the merits and risks of an investment in Recursion, and has the ability to bear the economic risks of its investment in such shares; and (v) understands that such shares may bear one or more legends in substantially the following form and substance:

> "THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR UNDER THE SECURITIES LAWS OF ANY STATE. THESE SECURITIES ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE AND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE ACT AND APPLICABLE STATE SECURITIES LAWS, PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM. INVESTORS SHOULD BE AWARE THAT THEY MAY BE REQUIRED TO BEAR THE FINANCIAL RISKS OF THIS INVESTMENT FOR AN INDEFINITE PERIOD OF TIME. THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER TO THE EFFECT THAT ANY PROPOSED TRANSFER OR RESALE IS IN COMPLIANCE WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS."

e. *Registration of Recursion Class A Common Stock*.

i. Recursion shall use commercially reasonable efforts to file or cause to be filed a registration statement (the "Registration Statement") under the Securities Act with the SEC (it being agreed that if Recursion is a well-known seasoned issuer as of the filing date, such registration statement shall be an automatic shelf registration statement, or a prospectus supplement to an effective automatic shelf registration statement, that shall become effective upon filing with the SEC pursuant to Rule 462(e) of the Securities Act) providing

for the resale by Tempus of all shares of Recursion Class A Common Stock issued with respect to the Initial License Fee or any Annual License Fee, if any, as soon as practicable but in no event later than thirty (30) days after each such issuance. Recursion shall use commercially reasonable efforts to cause each such registration statement to become effective as promptly as possible but in any event within thirty (30) days (or, in the event of a full review, up to ninety (90) days to the extent necessary) following its respective initial filing date and to keep such registration statement effective at all times until all shares registered thereunder have been sold or may be sold without restriction or volume limitation under Rule 144 (the "Effectiveness Period"). Recursion will provide a draft of the Registration Statement to Tempus for review at least five (5) business days in advance of the anticipated initial filing date. In no event shall Tempus be identified as a statutory underwriter in the Registration Statement without its prior written consent. Notwithstanding the foregoing sentence, Recursion may suspend the use of any prospectus included in any registration statements contemplated by this Section 5.e for not more than sixty (60) consecutive days or for a total of not more than ninety (90) days in any twelve (12) month period (an "Allowed Suspension") in the event that Recursion determines in good faith that such suspension is necessary to (A) delay the disclosure of material nonpublic information concerning Recursion, the disclosure of which at the time is not, in the good faith opinion of Recursion, in the best interests of Recursion or (B) amend or supplement any such registration statement or the related prospectus so that such registration statement or prospectus shall not include any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein not misleading in the light of the circumstances under which they were made; provided, that Recursion shall promptly notify Tempus in writing of the commencement of an Allowed Suspension and advise Tempus in writing to cease all sales under such registration statement until the end of the Allowed Suspension.

ii. Recursion shall: (A) advise Tempus by email to legal@tempus.com (1) as promptly as practicable after a Registration Statement or any amendment thereto has been filed with the SEC and when such Registration Statement or any post-effective amendment thereto has become effective other than, in each case, the filing or effectiveness of any amendment or deemed amendment that is made through the filing of any incorporated document; (2) as promptly as practicable of any request by the SEC for amendments or supplements to any Registration Statement or the prospectus included therein or for additional information with respect thereto other than, in each case, for any such request or such additional information that relates to documents incorporated in any Registration Statement or prospectus; (3) within two (2) trading days after the date of the issuance by the SEC of any stop order suspending the effectiveness of any Registration Statement or the initiation of any proceedings for such purpose; (4) within two (2) trading days after the receipt by Recursion of any notification with respect to the suspension of the qualification of the shares of Recursion Class A Common Stock included therein for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; and (5) within four (4) trading days after the occurrence of any event that requires the making of any changes in any Registration Statement or prospectus or the documents incorporated therein so that, as of such date, the statements therein are not misleading and do not omit to state a material fact required to be stated therein or necessary to make the statements therein (in the case of a prospectus, in the light of the circumstances under which they were made) not misleading; *provided* that the Company will not have any obligation to advise Tempus pursuant to this clause ii.(A)(5) to the extent that the information is filed with the SEC within such four (4) trading days; and *provided further* that Recursion shall not, when so advising Tempus of such events pursuant to this clause ii.(A)(5), be required to provide

Tempus with any material, non-public information regarding Recursion, and (B) with a view to making available to Tempus the benefits of Rule 144 that may, at such times as Rule 144 is available to Tempus, permit Tempus to sell securities of Recursion to the public without registration, Recursion agrees to, for so long as Tempus owns shares of Recursion Class A Common Stock, use commercially reasonable efforts to: (1) make and keep public information available, as those terms are understood and defined in Rule 144 and (2) file with the SEC in a timely manner all reports and other documents required of Recursion under the Securities Act and the Exchange Act so long as Recursion remains subject to such requirements and the filing of such reports and other documents is required for the applicable provisions of Rule 144.

iii. Subject to receipt from Tempus by Recursion and the Transfer Agent of customary representations and other documentation reasonably acceptable to Recursion and the Transfer Agent in connection therewith, Recursion shall remove any legend from the book entry position evidencing the shares of Recursion Class A Common Stock issued hereunder and Recursion will, if required by the Transfer Agent, use its commercially reasonable efforts to cause an opinion of Recursion's counsel be provided, in a form reasonably acceptable to the Transfer Agent to the effect that the removal of such restrictive legends in such circumstances may be effected under the Securities Act, (1) following the time the Registration Statement is declared effective, (2) if such shares have been sold pursuant to Rule 144 or any other applicable exemption from the registration requirements of the Securities Act, or (3) if such shares are eligible for resale under Rule 144(b)(1) or any successor provision without the requirement for Recursion to be in compliance with the current public information requirement under Rule 144 and without volume or manner-of-sale restrictions applicable to the sale or transfer of such Shares. If restrictive legends are no longer required for such shares pursuant to the foregoing, Recursion shall, in accordance with the provisions of this section and within two (2) trading days of any request therefor from Tempus accompanied by such customary and reasonably acceptable representations and other documentation referred to above establishing that restrictive legends are no longer required, use commercially reasonable efforts to deliver to the Transfer Agent irrevocable instructions to make a new, unlegended entry for such book entry shares. Tempus agrees with Recursion that it will only sell shares of Recursion Class A Common Stock pursuant to either the registration requirements of the Securities Act, including any applicable prospectus delivery requirements, or an exemption therefrom, and that if shares are sold pursuant to the Registration Statement, they will be sold in compliance with the plan of distribution set forth therein, and acknowledges that the removal of the restrictive legend from certificates representing shares as set forth above is predicated upon Recursion's reliance upon this understanding.

iv. Recursion agrees to indemnify and hold harmless, to the extent permitted by law, Tempus, its directors, officers, employees, advisors and agents, and each person who controls Tempus (within the meaning of the Securities Act or the Exchange Act) and each affiliate of Tempus (within the meaning of Rule 405 under the Securities Act) from and against any and all losses, claims, damages, liabilities, costs and out-of-pocket expenses (including, without limitation, any reasonable and documented attorneys' fees and expenses incurred in connection with defending or investigating any such action or claim) ("Losses") that arise out of, are based on or are caused by (A) any untrue or alleged untrue statement of material fact contained in any Registration Statement, prospectus included in any Registration Statement or preliminary prospectus or any amendment thereof or supplement thereto or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any prospectus or preliminary

prospectus or any amendment thereof or supplement thereto, in light of the circumstances under which they were made) not misleading, or (B) subject to the accuracy of the representations and warranties of Tempus in Section 5.d above and compliance by Tempus with applicable federal and state securities laws with respect to the Issued Recursion Shares, any violation by Recursion of the Securities Act, the Exchange Act or any state securities law or any rule or regulation thereunder relating to action or inaction required of Recursion in connection with registration of any Issued Recursion Shares thereunder, except to the extent, but only to the extent, such Losses are based solely upon information regarding Tempus furnished in writing to Recursion by or on behalf of Tempus expressly for use therein or was reviewed and approved in writing by Tempus expressly for use in the Registration Statement.

v. Tempus agrees to indemnify and hold harmless Recursion, its directors and officers and agents and each person who controls Recursion (within the meaning of the Securities Act) against any Losses that arise out of, are based on or are caused by (A) any breach or violation of any representations and warranties of Tempus in Section 5.d above, or any failure by Tempus to comply with applicable federal and state securities laws with respect to the issuance or transfer of any Issued Recursion Shares, (B) any untrue or alleged untrue statement of material fact contained in any Registration Statement, prospectus included in any Registration Statement or preliminary prospectus or any amendment thereof or supplement thereto or any omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any prospectus or preliminary prospectus or any amendment thereof or supplement thereto, in light of the circumstances under which they were made) not misleading, but only to the extent that such untrue statement or omission is based on information regarding Tempus furnished in writing to Recursion by or on behalf of Tempus expressly for use therein, and (C) the use by Tempus of a prospectus during an Allowed Suspension after Recursion has notified Tempus in writing of such Allowed Suspension. In no event shall the aggregate liability of Tempus under this clause (v) be greater in amount than the dollar amount of the net proceeds received by Tempus upon the sale of the shares issued pursuant to this Agreement giving rise to such indemnification obligation.

6. Use of Licensed Data. The following terms apply to all Licensed Data under this Agreement.

a. *Restrictions*. Client agrees to the following terms on its behalf and on behalf of all Affiliates and Authorized Users:

i. Client will implement rigorous data access controls for Authorized Users. Each Authorized User must acknowledge that the Authorized User has reviewed, understands, and will comply with the terms this Agreement.

ii. Client is responsible for the acts and omissions of all Authorized Users hereunder.

iii. Any Reproduction from the use of Licensed Data (or Reproduction of the Licensed Data itself) must include appropriate attribution to Tempus. Reproduction of Licensed Data requires Tempus' prior written consent, which will not be unreasonably withheld.

iv. Client will not re-identify the Licensed Data as to patient, provider, or practice and will ensure that the Licensed Data is not re-identified. Client will not, and will not permit any third party to, contact any individual whose information may be included in the Licensed Data.

v. Client will maintain a reasonable internal governance procedure that prohibits and is designed to avoid unintentional or inadvertent re-identification.

vi. Client will not remove or alter any notice of confidentiality, copyright, trademark, logo or other notice of ownership, origin, or confidentiality in any report, document, or copy of the Licensed Data.

vii. Client will not access or use Licensed Data for any purpose not permitted by this Agreement.

viii. Client will not re-sell or transfer Licensed Data (or access to Licensed Data) to any third party who is not an Authorized User without prior written permission from Tempus.

ix. Any use of Licensed Data resulting in a cohort of fewer than fifteen (15) research subjects/patients per any three digit zip code range is not permitted.

x. Client will act in an ethical and responsible manner when accessing and using Licensed Data.

xi. Client agrees that Tempus does not endorse any academic, scientific, or public presentations, or abstracts, posters, or manuscripts, and Client will not attempt to indicate any such endorsement.

xii. Client will comply with all applicable laws and industry-standard guidelines when carrying out activities under this Agreement, including securities laws, antitrust laws, HIPAA, the U.S. Food and Drug Administration (FDA) Guidance on Industry-Supported Scientific and Educational Activities, the Federal Food, Drug, and Cosmetic Act and associated regulations, federal and state anti-kickback laws and guidance, the Council of Medical Specialty Societies (CMSS) Code of Interactions with Companies, the American Medical Association Code of Medical Ethics and associated opinions, policies adopted by the FDA relating to industry- sponsored educational activities, the Accreditation Council for Continuing Medical Education (ACCME) Standards for Commercial Support, the Pharmaceutical Research and Manufacturers of America (PhRMA) Code on Interactions with Healthcare Professionals, and the ICMJE Recommendations for publication authorship.

xiii. Client agrees to immediately return Licensed Data at the conclusion of the License Term or termination of the applicable Order Form or this Agreement, subject to the terms contained herein.

b. *Compliance*.

i. The funds provided under this Agreement are not being given in exchange for any explicit or implicit agreement to purchase, prescribe, recommend, influence or provide favorable formulary status for Client's products. This Agreement is not for the purpose of promoting any product, service, or company. Client will not and will ensure that Client's Affiliates and Authorized Users do not, offer any inducements to Tempus, any of its Affiliates, or any health care providers relating to this Agreement.

ii. Tempus acknowledges that any direct or indirect Payments or Transfers of Value to Covered Recipients are subject to transparency reporting requirements, including disclosure on Client's website. Tempus and Client will not, and Client will ensure that Client's Affiliates do not, knowingly make any indirect or direct Payment or Transfer of Value to a Covered Recipient on behalf of Client in connection with this Agreement without the other Party's consent and prior written approval. Client will report all such Payments or Transfers of Value to U.S. Covered Recipients according to a centrally managed, pre-set rate structure based on a fair market value analysis conducted by Client and in accordance with applicable law. Tempus and Client agree that the license to Licensed Data or any other services or products described in agreements executed contemporaneously with this Agreement do not give rise to or constitute a Payment or Transfer of Value to a Covered Recipient.

iii. Tempus and Client and their respective Affiliates, representatives, agents and employees will comply with the U.S. Foreign Corrupt Practices Act, as amended, the UK Bribery Act of 2010, and any other applicable anti-corruption laws for the prevention of fraud, racketeering, money laundering or terrorism, and will not knowingly take any action that will, or would reasonably be expected to, cause the other Party or its Affiliates to be in violation of any such laws or policies.

iv. Neither Party has received or been offered any illegal or improper payment, bribe, kickback, gift, or other item of value from an employee or agent of the other Party in connection with this Agreement. The Parties intend for their relationship and interactions to comply with the following: (i) the federal anti-kickback statute (42 U.S.C. § 1320a-7b(b)) and the associated safe harbor regulations; and (ii) the limitation on certain physician referrals (Stark Law) (42 U.S.C. § 1395nn). Accordingly, no part of any remuneration provided under this Agreement or any other agreement between the Parties is a prohibited payment in exchange for recommending or arranging for the referral of business or the ordering of items or services, or otherwise intended to induce illegal referrals of business.

v. Tempus has obtained all consents and authorizations necessary to provide Recursion access to the Licensed Data for use in accordance with this Agreement. Tempus will comply with all applicable laws and industry-standard guidelines when carrying out activities under this Agreement, including securities laws, antitrust laws, HIPAA, the U.S. Food and Drug Administration (FDA) Guidance on Industry-Supported Scientific and Educational Activities, the Federal Food, Drug, and Cosmetic Act and associated regulations, federal and state anti-kickback laws and guidance, the Council of Medical Specialty Societies (CMSS) Code of Interactions with Companies, the American Medical Association Code of Medical Ethics and associated opinions, policies adopted by the FDA relating to industry- sponsored educational activities, the Accreditation Council for Continuing Medical Education (ACCME) Standards for Commercial Support, the Pharmaceutical Research and Manufacturers of America (PhRMA) Code on Interactions with Healthcare Professionals, and the ICMJE Recommendations for publication authorship.

c. *Regulatory Filings*. As between the Parties, Client will have sole control over any regulatory filings with respect to results obtained from use of Licensed Data. Client may disclose limited portions of the Licensed Data to governmental authorities to the extent necessary to support such filings, if Client uses all reasonable efforts to protect the confidentiality of the Licensed Data, limit the risk of re-identification, and properly attribute Licensed Data to Tempus. Any disclosure beyond the limited disclosure described in this paragraph shall require Tempus' prior written consent, which shall not be unreasonably withheld.

d. *Security Incident Reporting*. Each Party agrees to notify the other Party promptly, but in no event later than ten (10) business days after becoming aware of the occurrence of: (i) a potential security breach involving Licensed Data; (ii) re-identification of any of the Licensed Data; (iii) a complaint related to a request for access to the Licensed Data; or (iv) any inquiry, investigation, audit, or government enforcement action related to the Licensed Data. If Client or any of Client's Affiliates becomes legally compelled to disclose any Licensed Data, then to the extent permitted by applicable law, Client will notify Tempus as soon as practical, but in any event within ten (10) business days of learning of such requirement, so that Tempus may seek a protective order or other appropriate remedy. If any of the events set out in this Section occurs, Client agrees to cooperate and cause Client's Affiliates to cooperate with Tempus and take any actions reasonably requested by Tempus to minimize the re-identification risk and potential damage resulting from the event.

e. *Non-Exclusivity*. This is a non-exclusive agreement. Nothing in this Agreement will prevent Tempus from (a) making available to other clients the same or substantially similar services and licenses, or (b) making available to other Tempus clients custom data sets that are the same or similar to the Licensed Data, so long as none of the foregoing include use of Client's Confidential Information. Client acknowledges that Tempus' or Tempus licensees' use of Licensed Data may result in the same or similar outcomes, conclusions, reports, and other results.

f. *NO OTHER REPRESENTATIONS OR WARRANTIES. EXCEPT AS EXPRESSLY PROVIDED:*

i. TEMPUS DISCLAIMS ANY AND ALL EXPRESS, IMPLIED, STATUTORY, AND OTHER WARRANTIES AND REPRESENTATIONS OF ANY KIND, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUALITY OF INFORMATION, OR TITLE.

ii. TEMPUS MAKES NO REPRESENTATIONS OR WARRANTIES ABOUT THE SUITABILITY OR ACCURACY OF ANY SERVICES, THE LICENSED DATA, OR ANY OTHER TEMPUS MATERIALS. TEMPUS USES DATA PROVIDED TO TEMPUS BY THIRD PARTIES THAT HAS BEEN DE-IDENTIFIED TO CREATE THE LICENSED DATA "AS IS" AND IS NOT RESPONSIBLE FOR THE ACCURACY, COMPLETENESS, AND/OR INTEGRITY OF SUCH DATA. TEMPUS DISCLAIMS ANY LIABILITY RESULTING FROM ANY SUCH ISSUES RELATING TO SUCH DATA. TEMPUS HAS NO LIABILITY FOR CLINICAL, OPERATIONAL, BUSINESS, OR ANY OTHER DECISIONS MADE BY YOU, YOUR AFFILIATES, OR AUTHORIZED USERS BASED ON THE LICENSED DATA.

iii. ALL TECHNOLOGY, RIGHTS AND SERVICES ARE LICENSED AND OTHERWISE PROVIDED "AS IS," "WHERE-IS," AND "WITH ALL FAULTS."

Exhibit 2
Lens Subscription Agreement

This Subscription Agreement (the "Subscription Agreement") is entered into by and between Tempus Labs, Inc. ("Tempus") and Recursion Pharmaceuticals, Inc. ("Client"), incorporates by reference the Lens Terms of Use (accessible via Lens), and is subject to that Master Agreement entered into between the Parties (as may be amended or restated, the "Master Agreement"). Capitalized terms not defined herein shall have the meanings set forth in the Master Agreement.

1. Software and Accounts.

a. *Software*. The "Software" is Tempus' LENS software, an online application that permits the viewing and analysis of clinical, molecular, and other health data (collectively "Data") maintained by Tempus. The Software provides a view of health information that does not include the 18 identifiers listed in the Safe Harbor method for de-identification set forth in 45 C.F.R. § 164.514(b)(2)(i). The features, functionality, user interface, look-and-feel, and other aspects of the Software may change from time to time in Tempus' sole discretion, provided that Tempus will provide Client with the most recent version of the Software so long as Client remains current on the Subscription Fee.

b. *Provision of LENS.* Tempus will make the Software available to Client pursuant to this Subscription Agreement. Client may provide Software access to up to [***] named employees or contractors of Client or its affiliates, and Client will notify Tempus which such individuals should be granted access to the Software (each, a "User"). Client will also provide Tempus with contact information for one or more authorized representatives to manage all available access limitations. Tempus will rely on Client and/or its authorized representative to manage its LENS permissions. Each User must keep their account credentials for the Software confidential. Client is responsible for all acts and omissions of its Users.

2. Subscription Fee. Recursion will pay Tempus $[***] per year for the duration of the Term ("Subscription Fee"). Tempus will issue the first invoice as of the Effective Date and subsequent invoices annually through the fourth anniversary of the Effective Date. The total Subscription Fee will be $[***] during the Term, and shall continue at the same rate of $[***] per year if the Master Agreement is extended or renewed in accordance with the Master Agreement.

3. Term and Termination. The Term of the Master Agreement is incorporated by reference. In addition, Client's license to use the Software will terminate as of the termination date of the Master Agreement. In addition, Tempus may suspend Client's access to the Software without liability upon thirty (30) days prior written notice to Client (which such notice period may be reduced or eliminated in Tempus' reasonable discretion to address a material security threat), if (a) Client or any User breaches this Subscription Agreement, or (b) Tempus has reason to believe that Client or any person or entity accessing the Software through Client is abusing the Software or is using it unlawfully or in a manner that threatens the security or integrity of the Software, and in each case does not cure such breach or threat to the security or integrity of the Software during such thirty (30)-day period.

4. Optional Structured Data Services for Healthcare Providers.

a. *Data Updates*. The health data made available to Client through the Software may include the health records of patients who received care or participated in research through Client and/or its affiliates. Some patients may have received next-generation sequencing through Tempus. Client may provide Tempus with updated medical records from such patients or records of other patients who received sequencing or other testing from laboratories other than Tempus (collectively, "Data Updates"), to improve the view of the health data available to Client through the Software.

b. *Description of Data Structuring Services*. If Client provides Data Updates to Tempus, Tempus will extract data elements from the records, organize those data elements into a structured format, and make the structured data available through the Software. Tempus will treat all protected health information received under this Section 4 in accordance with the terms of the BAA, if any. Client retains ownership of any protected health information provided to Tempus hereunder.

5. **Client Policies**. Client agrees that it is solely responsible for complying with all of it and its affiliates' policies, rules, guidelines, and similar requirements, including requirements that govern patient consent and the collection, processing, transfer, analysis, use, and storage of protected health information ("Client Policies"). Client will only provide data, if any, to Tempus, and use the data accessible through the Software, to the extent such transfer and use, as well as Tempus' use of any such data to be provided to Tempus in accordance with this Subscription Agreement, complies with Client Policies. Tempus disclaims any responsibility and liability for any breach of Client Policies as they apply to data and specimens provided by Client to Tempus hereunder.

6. **Data Use**. Through its use of the Software, Client and its Users may have access to de-identified data from Tempus' database that does not originate from Client (the "Licensed Data"). With respect to the Licensed Data, Client agrees to the Licensed Data Terms set forth in Exhibit 1 of the Master Agreement on behalf itself and all Users.

7. **Additional Terms.**

a. *No orders required*. Client and its ordering clinicians are under no obligation to recommend, order, or otherwise refer Tempus tests or services in order to have access to the Software.

b. *Assignment*. This Subscription Agreement is binding upon, and will inure to the benefit of, the successors and permitted assigns of the Parties. Either Party may assign its rights and responsibilities under this Subscription Agreement to any of its affiliates or in connection with a merger, acquisition, corporate reorganization, or sale of all or substantially all of its assets; provided, in the case of such an assignment by Tempus, Tempus provides within a reasonable amount of time written notice to Client of any such permitted assignment and the assignee agrees in writing to be bound by the terms and conditions of this Agreement, including without limitation with respect to permitting Client to download, store, copy, use, compile, display, and access the Licensed Data, in each case in accordance with rights and licenses set forth herein. Any other purported assignment is void.