# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION

**Washington, D.C. 20549**

# FORM 10-K

**(Mark One)**

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended December 31, 2022**

**OR**

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from to**

**Commission File Number 001-37894**

# FULGENT GENETICS, INC.

**(Exact name of registrant as specified in its charter)**

| **Delaware** | **81-2621304** |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |
| **4978 Santa Anita Avenue Temple City, CA** | **91780** |
| **(Address of principal executive offices)** | **(Zip Code)** |

**Registrant's telephone number, including area code: (626) 350-0537**

Securities registered pursuant to Section 12(b) of the Act:

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|---|---|---|
| Common Stock, par value $0.0001 per share | FLGT | The Nasdaq Stock Market (Nasdaq Global Market) |

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ☐ NO ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES ☐ NO ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). YES ☒ NO ☐

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 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to § 240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). YES ☐ NO ☒

The aggregate market value of the registrant's voting and non-voting common equity held by non-affiliates as of June 30, 2022 (computed by reference to the price at which the registrant's common stock was last sold on such date, the last business day of the registrant's most recently completed second fiscal quarter, as reported by the Nasdaq Global Market) was approximately $977.9 million. For purposes of this calculation, it has been assumed that all shares of the registrant's common stock held by directors, executive officers and persons beneficially owning 5% or more of the registrant's common stock are held by affiliates; however, the treatment of these persons as affiliates for purposes of this calculation is not, and shall not be considered, a determination as to whether such persons are affiliates of the registrant for any other purpose.

As of February 15, 2023, there were 29,518,811 outstanding shares of the registrant's common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the registrant's definitive proxy statement for its 2023 annual meeting of stockholders are incorporated by reference in Part III of this report.

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## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or Exchange Act. Forward-looking statements are statements other than historical facts and relate to future events or circumstances or our future performance, and they are based on our current assumptions, expectations and beliefs concerning future developments and their potential effect on our business. The words "believe," "may," "will," "potentially," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "expect," "possible," "likely," "probable," and similar expressions that convey uncertainty of future events or outcomes identify forward-looking statements.

The forward-looking statements in this report include statements about, among other things:

- developments, projections, and trends relating to us, our competitors, and our industry;
- our plans for our business;
- our ability to integrate any acquired businesses and technologies and to realize the value of any acquired entities, joint ventures, or investments;
- our operating performance, including our ability to stabilize the historical fluctuations in our performance and to achieve, maintain, or grow profitability;
- the rate and degree of market acceptance and adoption of our tests and testing services and other anticipated trends in our industry;
- our competitive advantages and our ability to remain competitive, particularly if the testing markets continue to expand, and competition becomes more acute;
- our ability to continue to expand our test menu and introduce other improvements to our tests;
- our continued ability to offer affordable pricing for our tests, to maintain the low internal costs of our business model, and to record acceptable margins on our sales;
- our ability to develop our therapeutic candidates, to satisfy the U.S. Food and Drug Administration's, or FDA's, regulatory requirements, and to commercialize our therapeutic candidates;
- the success of our competitors' research and development efforts for therapeutic candidates seeking to treat similar or the same indication as our therapeutic candidates;
- our ability to strengthen our existing base of customers by maintaining or increasing demand from these customers;
- our ability to grow and diversify our customer base;
- our reliance on a limited number of suppliers and their ability to adapt to possible disruptions in their operations;
- our use of our laboratory facilities and our ability to adapt in the event we need to relocate or in the event any of our facilities are damaged or rendered inoperable;
- our plans for future sales and marketing efforts;
- advancements in technology by us and our competitors;
- our use of technology and ability to prevent security breaches; unauthorized use or disclosure of health information, personal information, or sensitive personal information; loss of data; and other disruptions;
- our ability to effectively manage any growth we may experience, including expanding our infrastructure, developing increased efficiencies in our operations, and hiring additional skilled personnel in order to support any such growth;
- developments with respect to U.S. and foreign laws and regulations applicable to our business, and our ability to comply with these regulations;
- our ability to effectively respond to any litigation or governmental investigations;
- our ability to prevent errors in interpreting the results of our tests so as to avoid product liability and professional liability claims;
- our ability to obtain and maintain coverage and adequate reimbursement for our tests and to manage the complexity of billing and collecting such reimbursement;
- the state of the U.S. and foreign healthcare markets, including the role of governments in the healthcare industry, generally, pressures or incentives to reduce healthcare costs while expanding individual benefits, and the impact of general uncertainty in the U.S. healthcare regulatory environment;
- our ability to attract, retain, and motivate key scientific and management personnel;
- our ability to obtain and maintain protection of our trade secrets, licensed intellectual property, patent rights, and other intellectual property rights and to not infringe the rights of others;
- our expectations regarding inflation and our future expense levels and our ability to appropriately forecast and plan our expenses;
- our expectations regarding our future capital requirements and our ability to obtain additional capital if and when needed; and
- the impact of the above factors and other future events on the market price of our common stock.

These forward-looking statements are subject to a number of risks and uncertainties, including, among others, those described under Item 1A, "Risk Factors" and elsewhere in this report. Moreover, we operate in a competitive and rapidly evolving industry, and new risks emerge from time to time. It is not possible for us to predict all of the risks we may face, nor can we assess the impact of all factors on our business or the extent to which any factor or combination of factors could cause actual results to differ from our expectations. In light of these risks and uncertainties, the forward-looking events and circumstances described in this report may not occur, and actual results could differ materially and adversely from those described in or implied by any forward-looking statements we make. Although we have based our forward-looking statements on assumptions and expectations we believe are reasonable, we cannot guarantee future results, levels of activity, performance or achievements, or other future events. As a result, forward-looking statements should not be relied on or viewed as predictions of future events, and this report should be read with the understanding that our actual future results, levels of activity, performance and achievements, or other future events may be materially different than what we currently expect.

The forward-looking statements in this report speak only as of the date of this document, and except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report to conform these statements to actual results or to changes in our expectations.

We qualify all of our forward-looking statements by this cautionary note.

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*We own registered or unregistered trademark rights to Fulgent®, Picture Genetics® and our company name and logo. Any other service marks, trademarks and trade names appearing in this report are the property of their respective owners. We do not use the ® or ™ symbol in each instance in which one of our trademarks appears in this report, but this should not be construed as any indication that we will not assert our rights thereto to the fullest extent under applicable law.*

*Fulgent Genetics, Inc., together with its subsidiaries and an affiliated professional corporation with which the Company has a management services arrangement, are collectively referred to in this Annual Report on Form 10-K as the "Company," "Fulgent," "we," "us," and "our."*

## PART I

### Item 1. Business.

#### Overview

We are a technology-based company with a well-established clinical diagnostic business and a therapeutic development business. Our clinical diagnostic business offers molecular diagnostic testing services, comprehensive genetic testing, and high-quality anatomic pathology laboratory services designed to provide physicians and patients with clinically actionable diagnostic information to improve the quality of patient care. Our therapeutic development business is focused on developing drug candidates for treating a broad range of cancers using a novel nanoencapsulation and targeted therapy platform designed to improve the therapeutic window and pharmacokinetic profile, or PK profile, of new and existing cancer drugs. We aim to transform from a genomic diagnostic business into a fully integrated precision medicine company.

#### Mission and Vision

Founded in 2011, Fulgent began with two simple ideas: flexibility and affordability. We offer and develop flexible and affordable diagnostic and genetic tests and testing services designed to improve patient care and quality of life. We strive to provide the most effective and wide-ranging genetic and diagnostic testing menu on the market. Our long-term vision is to transform from a diagnostic business into a fully integrated precision medicine company focused on oncology through the addition of Fulgent Pharma Holdings, Inc., or Fulgent Pharma.

#### Our Clinical Diagnostic Tests and Testing Services

We have broad testing capabilities with a testing and testing services menu that is scalable and affordable to our customers. Our testing and testing services include:

Our comprehensive anatomic pathology tests and testing services include gastrointestinal pathology, dermatopathology, urologic pathology, breast pathology, neuropathology, and hematopathology. We plan to leverage our existing managed care contract networks and physician relationships to provide diagnostic testing and testing services complimentary to this testing portfolio. These tests and testing services are supported by our expansive geographic presence with several CLIA-licensed laboratories in the United States.

Our specialized oncology tests and testing services utilize a wide array of technologies. These test and testing services utilize flow cytometry, cytogenetic analysis, florescence in-situ (FISH), immunohistochemistry, molecular genetics, NGS, and consultations in hematopathology and surgical pathology.

We also offer NGS services and have experienced recent traction in NGS services related to hereditary cancer, cardiovascular genetics, reproductive health, neurodegenerative genetics, and our recently launched pharmacogenetic tests.

Picture Individual customers may also purchase certain tests and testing services through our direct-to-consumer Picture Genetics platform. These Picture Genetics tests help customers identify important health markers in their personal DNA.

#### Our Technology Platform

Our business is built on our proprietary technology platform, which includes proprietary gene probes, data suppression and comparison algorithms, adaptive learning software, and proprietary laboratory information management systems. This platform provides a broad test menu, the ability to rapidly develop and launch new tests, customizable test offerings, lower costs per test, and high efficiency. As an example, this technology platform allowed us to rapidly respond to the COVID-19 pandemic and scale our business to provide COVID-19 tests with reliable results and rapid turnaround time in a way that surpassed even our largest competitors. We are proud that through this effort we supplied approximately 19.3 million COVID-19 tests from 2020 through 2022, generating over $1.7 billion in revenue.

## Our Customers

We currently classify our customers by their payor types: (i) Insurance, including claims covered by the Health Resources & Services Administration, or HRSA, COVID-19 Uninsured Program for uninsured individuals; (ii) Institutional, including hospitals, medical institutions, other laboratories, governmental bodies, payors, municipalities, and large corporations; and (iii) Patients who pay directly. Typically, we bill our Institutional customers for our tests, and they are responsible for paying us directly and billing their patients separately or obtaining reimbursement from third-party payors. In some cases, Institutional customers receive a per-visit or per-admission payment that includes our testing, which means that separate reimbursement is not available. A small percentage of our customers are patients, who elect to pay for tests themselves with out-of-pocket payments after their physicians have ordered our tests.

We consider each single billing and paying unit to be an individual customer, even though a unit may represent multiple physicians and healthcare providers ordering tests. Aggregating customers that are under common control, one of our customers, the County of Los Angeles, contributed 19% and 26% of our total revenue in 2022 and 2021, respectively.

## Sales and Marketing

Our sales and marketing force currently consists of two internal teams of sales and marketing professionals, respectively, with deep experience in our industry, as well as a network of field-based sales representatives who are knowledgeable about our tests. The field sales team grew significantly in 2022, mostly driven by the acquisition of Symphony Buyer, Inc., or Inform Diagnostics, and Cytometry Specialists, Inc., or CSI. Historically, we have significantly relied on organic growth and word-of-mouth among our customers to generate interest in our tests, which we believe demonstrates the value of our offering. In recent years, we have invested significant time and capital to strengthen our sales and marketing efforts, including increasing the size and restructuring the organization of our internal team, re-focusing our initiatives and strategies, and increasing the overall scope of our marketing activities. On a regular basis, we continue to evaluate the need to grow the size of our sales team and market resources.

## Our Suppliers

We rely on a limited number of suppliers for certain laboratory substances used in the chemical reactions incorporated into our tests and testing services, which we refer to as reagents, as well as for the sequencers, collection kits, and various other equipment and materials we use in our laboratory operations. In particular, we rely on Illumina, Inc. as the sole supplier of the next generation sequencers and associated reagents we use to perform our genetic tests and as the sole provider of maintenance and repair services for these sequencers; on Roche Holdings AG for certain laboratory equipment, supplies, and services for our immunohistochemistry services; on Beckman Coulter Diagnostics for certain laboratory equipment, supplies, and services for our flow cytometry tests and testing services; and on Abbott Laboratories for certain laboratory equipment, supplies, and services for our FISH tests and testing services. While there are several sequencer suppliers that we believe could replace Illumina, and while we believe that we have sufficient alternative suppliers for our other needs, our laboratory operations could be interrupted if we encounter delays or difficulties in connection with securing these supplies, services, reagents, sequencers, other equipment, materials, or maintenance and repair services, which could occur for a variety of reasons, including if we need a replacement or temporary substitute for any of our limited or sole suppliers and are not able to locate and make arrangements with an acceptable replacement or temporary substitute.

## Competition

Our competitors include dozens of companies focused on pathology, genetic, and diagnostic testing services, including specialty and reference laboratories that offer traditional single-gene and multi-gene tests and other diagnostic test providers, as well as drug delivery platform companies and 505(b)(2) drug developers in the cancer therapeutics area. Principal competitors include companies such as Quest Diagnostics Incorporated; Laboratory Corporation of America Holdings; Abbott Laboratories; Ambry Genetics, a subsidiary of Konica Minolta Inc.; Baylor Genetics; Caris Life Sciences; GeneDx Holdings Corp.; Invitae Corporation; Myriad Genetics, Inc.; Natera, Inc.; NeoGenomics Laboratories, Inc.; Perkin Elmer, Inc.; Tempus; and other commercial and academic laboratories. Other established and emerging healthcare, information technology, and service companies may develop and sell competitive tests, which may include informatics, analysis, integrated genetic tools and services for health and wellness.

Additionally, participants in closely related markets, such as prenatal testing and clinical trial or companion diagnostic testing, could converge on offerings that are competitive with the type of tests we perform. Instances where potential competitors are aligned with key suppliers or are themselves suppliers could provide these potential competitors with significant advantages. Further, hospitals, research institutions, and eventually individual physicians and other practitioners may also seek to perform at their own facilities the type of genetic or diagnostic testing we would otherwise perform for them. In this regard, continued development of, and potential associated relative decreases in the cost of, equipment, reagents, and other materials and databases and genetic data interpretation services may enable broader direct participation in genetic testing and analysis and drive down the use of third-party testing companies such as ours. Moreover, cost decreases and increased direct participation, as well as cost-saving initiatives on the part of government entities and other third-party payors could intensify the downward pressure on the price for genetic analysis and interpretation generally. Moreover, the clinical diagnostic testing field continues to undergo significant consolidation, permitting larger clinical laboratory service providers to increase cost efficiencies and service levels and potentially resulting in more intense competition.

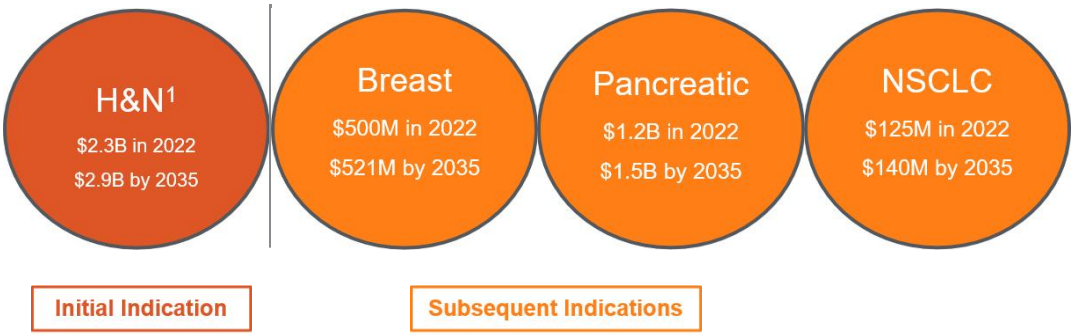
We believe we compare favorably with our competitors. However, many of our competitors have longer operating histories; larger customer bases; more expansive brand recognition; deeper market penetration; substantially greater financial, technological, and research and development resources; and selling and marketing capabilities and considerably more experience dealing with third-party payors. As a result, they may be able to respond more quickly to changes in customer requirements or preferences, develop faster and better advancements for their technologies and tests, create and implement more successful strategies for the promotion and sale of their tests, obtain more favorable results from third-party payors regarding coverage and reimbursement for their offerings, adopt more aggressive pricing policies for their tests, secure supplies from vendors on more favorable terms, or devote substantially more resources to infrastructure and systems development. In addition, competitors may be acquired by, receive investments from, or enter into other commercial relationships with larger, well-established, and well-financed companies. Further, companies or governments that effectively control access to genetic or diagnostic testing through umbrella contracts or regional preferences could promote our competitors or prevent us from performing certain tests in certain territories. We may not be able to compete effectively against these organizations.

## Fulgent Pharma

In 2022, we completed our acquisition of Fulgent Pharma Holdings, Inc., or Fulgent Pharma. Our efforts at Fulgent Pharma are based on a novel nano-drug delivery platform technology capable of delivering various water insoluble or poorly soluble drugs. Unlike some of the drug delivery materials such as Human Serum Albumin, or HSA, which is only soluble in water, our nano-drug delivery materials used for drug candidate development are soluble not only in water, but also in various organic solvents, as well as capable of hot melt mixing with active pharmaceutical ingredients, or APIs. We believe these advantages will allow us to generate a

much broader range of drug candidate formulations, particularly amorphous drug candidate formulations, which can be used for both IV and oral formulations with a goal to improve PK profile, as well as safety and efficacy.

The first product candidate from this platform is FID-007, a nanoencapsulated paclitaxel, and the target markets we have chosen to investigate for this drug candidate are large and well-established, including head and neck, or H&N, pancreatic, breast, and non-small cell lung cancer, or NSCLC, as shown in the figures below:




Note: U.S. opportunity shown
Sources: Evaluate Pharma, Wall Street research, and management pricing expectations
1.H&N market opportunity for both 2ndline and 3rd line therapy

FID-007 is currently being investigated in the United States in a Phase I clinical trial in patients diagnosed with various cancers including head and neck, ampullary, and pancreatic cancer. Top-line data from this trial is expected in the second quarter of 2023. Assuming positive data, we intend to seek regulatory approval in the United States using the 505(b)(2) pathway, which may shorten the clinical trial process and accelerate potential commercialization. We also plan to initiate Phase II clinical trials investigating the use of FID-007 in patients diagnosed with recurrent or metastatic head and neck and other cancers in late 2023 and 2024, respectively.

**Other Research and Development**

We have assembled a highly qualified team with expertise in a number of fields important to our business, such as bioinformatics, genetics, software engineering, laboratory management, and sales and marketing. This team conducts all of our research and development activities, including efforts to develop and curate our expansive library of genetic information and further expand our technology platform.

## Intellectual Property

We rely on a combination of registered and unregistered intellectual property rights, including trade secrets, certain licenses, patents, trademarks, and customary contractual protections, to protect our core technology and intellectual property.

### Trade Secrets

We rely on trade secrets, including unpatented know-how, technology, and other proprietary information, to maintain and develop the competitive position afforded by many of our laboratory, analytic, and business practices. For example, significant elements of our genetic tests and our testing procedures, including aspects of specimen preparation, our bioinformatics algorithms, and related processes and our adaptive learning software, are based on unpatented trade secrets and know-how. We try to protect trade secrets and know-how by taking reasonable steps to keep them confidential, including entering into nondisclosure and confidentiality agreements with parties who have access to them, such as our employees and certain third parties, and entering into invention assignment agreements with our employees and consultants that obligate them to assign to us any inventions developed in the course of their work for us.

### Trademarks

We own registered and unregistered trademark and service mark rights under applicable U.S. and foreign law to distinguish and/or protect our brand, including our company name and logo.

## Regulation

### Federal Regulations Applicable to Our Laboratory Operations

As we operate clinical laboratories in the United States, we are required to hold certain federal licenses, certifications, and permits to conduct our business. The Clinical Laboratory Improvement Amendments of 1988, or CLIA, establishes quality standards for all laboratory testing to ensure the accuracy, reliability and timeliness of patient test results. Our laboratories located in California, Texas, Georgia, Massachusetts, Arizona, and New York are CLIA-certified and are accredited by the College of American Pathologists, or CAP, a Centers for Medicare & Medicaid Service, or CMS, approved accrediting organization.

CLIA requires that we hold certificates for each of our laboratories applicable to the categories of testing that each laboratory performs and that we comply with various standards with respect to personnel qualifications, facility administration, proficiency testing, quality control and assurance, and inspections. Each of our laboratories must obtain a certificate from CMS, the agency that oversees CLIA, and CLIA compliance and certification is a prerequisite to be eligible to bill government payors and many private payors for our tests.

We are subject to survey and inspection every two years to assess compliance with CLIA's program standards, and we may be subject to additional unannounced inspections. We have CLIA certifications for our laboratories located in Temple City and El Monte, California; Houston and Irving, Texas; Needham, Massachusetts; Phoenix Arizona; Alpharetta, Georgia; and New York, New York. Each CLIA certification is valid for two years from the date of issuance. If one or more of our laboratories are found to be out of compliance with CLIA requirements, we may be subject to sanctions such as suspension, limitation or revocation of our CLIA certificate; a directed plan of correction; on-site monitoring; civil monetary penalties; civil injunctive suits; criminal penalties; exclusion from the Medicare and Medicaid programs; and significant adverse publicity.

In addition, we elect to participate in the accreditation program of CAP. CMS has deemed CAP standards to be equally or more stringent than CLIA regulations and has approved CAP as a recognized accrediting organization. An inspection by CAP is performed in lieu of inspection by CMS for CAP-accredited laboratories. Because we are accredited by the CAP Laboratory Accreditation Program, we are deemed to also comply with CLIA.

### State and Foreign Clinical Laboratory Licensure

Our clinical laboratories are required to maintain various state licenses issued by the respective Department of Health, based on all applicable state laws and regulations. State laws establish standards for day-to-day operations of our laboratories, including requirements with respect to the training and skills required of personnel, quality control, and proficiency testing requirements. If our clinical reference laboratories are out of compliance with the applicable state regulations, state agencies may suspend, restrict, or revoke our license to operate our clinical laboratories, assess substantial civil money penalties or impose specific corrective action plans. Any such actions could materially affect our business. Currently, we maintain good standing with all state authorities.

Additionally, several states require licensure for the out-of-state laboratories that accept specimens originate from those states. For example, our Texas laboratories hold the out-of-state licenses from California, New York, Maryland, Pennsylvania, and Rhode Island to perform testing on specimens from these states; and our Temple City, California laboratory holds the required out-of-state

laboratory licenses from New York, Maryland, Pennsylvania, and Rhode Island in order to perform testing on specimens from these states. For laboratories holding licenses from New York, the laboratory director of those laboratories must also maintain a Certificate of Qualification issued by New York's Department of Health, Clinical Laboratory Evaluation Program, or CLEP, in the permitted categories. The New York state laboratory laws and regulations impose stringent requirements for personnel qualifications, specimen retention, and consent for testing. Among other things, CLEP also requires approval on a test-specific basis before testing can be performed on specimens from New York.

Other states may adopt similar licensure requirements in the future, which could require us to modify, delay, or discontinue our operations in such jurisdictions. If we identify any other state with such requirements, or if we are contacted by any other state advising us of such requirements, we intend to follow instructions from the state regulators as to how to comply with such requirements.

We are also subject to regulation in foreign jurisdictions, which we expect will increase as we seek to expand international utilization of our tests, or if jurisdictions in which we pursue operations adopt new or modified licensure requirements. Foreign licensure requirements could require review and modification of our tests in order to offer them in certain jurisdictions or could impose other limitations, such as restrictions on the transport of human blood or other tissue necessary for us to perform our tests that may limit our ability to make our tests available outside of the United States on a broad scale.

**FDA Oversight of Our Tests and Testing Services**

The tests and testing services that we offer may be considered medical devices. Pursuant to its authority under the Federal Food, Drug, and Cosmetic Act, or FDC Act, the FDA has jurisdiction over medical devices, which are defined to include, among other things, in vitro diagnostic products, or IVDs, used for clinical purposes. The laws and regulations governing the marketing of IVDs are evolving, are extremely complex, and in many instances, there are no significant regulatory or judicial interpretations of these laws and regulations. The FDA regulates, among other things, the research, 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 products distributed domestically are safe and effective for their intended uses. In addition, the FDA regulates the import and export of medical devices.

We believe our tests fall within the definition of laboratory developed tests, or LDT. LDTs, which are a subset of IVDs that are intended for clinical use and designed, manufactured and used within a single laboratory. Although the FDA has statutory authority to assure that medical devices, including IVDs, are safe and effective for their intended uses, the FDA has historically exercised its enforcement discretion and not enforced applicable provisions of the FDC Act and regulations with respect to LDTs. As a result, we believe our diagnostic tests are not currently subject to the FDA's enforcement of its medical device regulations and the applicable FDC Act provisions.

Even though we commercialize our tests as LDTs, our tests may in the future become subject to more onerous regulation by the FDA. If and when the FDA begins to actively enforce its premarket submission regulations with respect to LDTs generally or to any of our tests in particular, whether as a result of new legislative authority or following formal notice-and-comment rulemaking, we may be required to obtain premarket clearance for our tests under Section 510(k) of the FDC Act or approval of a pre-market approval application, or PMA. The process for submitting a 510(k) premarket notification and receiving FDA clearance usually takes from three to 12 months, but it can take significantly longer, and clearance is never guaranteed. The process for submitting and obtaining FDA approval of a PMA generally takes from one to three years or even longer, and approval is not guaranteed. PMA approval typically requires extensive clinical data and can be significantly longer, more expensive and more uncertain than the 510(k) clearance process. If premarket review is required for some or all of our tests, the FDA could require that we stop selling our tests and testing services pending clearance or approval and conduct clinical testing prior to making submissions to FDA to obtain premarket clearance or approval. The FDA could also require that we label our tests as investigational or limit the labeling claims we are permitted to make.

The FDA enforces its medical device requirements by various means, including inspection and market surveillance. If the FDA finds a violation, it can institute a wide variety of enforcement actions, ranging from an Untitled Letter or Warning Letter to more severe sanctions, such as: fines, injunctions and civil penalties; recall or seizure of products; operating restrictions, partial suspension or total shutdown of production; and criminal prosecution. Failure to comply with any applicable FDA requirements could trigger a range of enforcement actions by the FDA, including warning letters, civil monetary penalties, fines, injunctions, criminal prosecution, consent decrees, repairs, replacements, refunds, recalls or seizures of products, operating restrictions, partial suspension or total shutdown of operations and denial of or challenges to applications for clearance or approval, as well as significant adverse publicity.

**Regulations Regarding Advertising of Laboratory Services or LDTs**

Our advertising for laboratory services and tests is subject to federal truth-in-advertising laws enforced by the Federal Trade Commission, or FTC, as well as comparable state consumer protection laws. Under the Federal Trade Commission Act, or the FTC Act, the FTC is empowered, among other things, to (a) prevent unfair methods of competition and unfair or deceptive acts or practices in or affecting commerce; (b) seek monetary redress and other relief for conduct injurious to consumers; and (c) gather and compile information and conduct investigations relating to the organization, business, practices, and management of entities engaged in commerce. The FTC has very broad enforcement authority, and failure to abide by the substantive requirements of the FTC Act and other consumer protection laws can result in administrative or judicial penalties, including civil penalties, injunctions affecting the manner in which we would be able to market services or products in the future, or criminal prosecution.

**Rules and Regulations Relating to Payor Reimbursement for our Tests and Testing Services**

***CPT Codes***

We bill third-party payors, both commercial and government, for our tests and testing services using Current Procedural Terminology, or CPT, codes, which are published by the American Medical Association, or AMA. CPT codes in their current form are not readily applied to many of the genetic tests we conduct. For example, for many of our multi-gene panels, there may not be an appropriate CPT code for one or more of the genes in a panel, in which case our test may be billed under a miscellaneous code for an unlisted molecular pathology procedure. Many third-party payors do not have a set reimbursement rate for this miscellaneous code. Prior to performing a test, we may negotiate the reimbursement rate with the payor if the benefits investigation has determined the test to be medically necessary, and the payor has issued prior authorization. When the test results are delivered, after we file the claim, we may also need to resubmit documentation or appeal a denial, which can cause delay in the reimbursement of the claim or our inability to get reimbursed.

***PAMA***

In April 2014, Congress passed the Protecting Access to Medicare Act of 2014, or PAMA, which included substantial changes to the way in which clinical laboratory services are priced and paid under Medicare's CLFS. On June 23, 2016, CMS published the final rule implementing the reporting and rate-setting requirements. Under PAMA, laboratories that receive the majority of their Medicare revenue from payments made under the CLFS or the Physician Fee Schedule are required to report private payor payment rates and volumes for clinical diagnostic laboratory tests, or CDLTs, to CMS every three years (or annually for advanced diagnostic laboratory test, or ADLT). We do not believe that any of our tests meet the current definition of ADLT. We, therefore, must report private payor rates for our tests every three years. Laboratories that fail to report the required payment information may be subject to substantial civil monetary penalties.

As required under PAMA, CMS uses the data reported by laboratories to develop Medicare payment rates for laboratory tests equal to the volume-weighted median of the private payor payment rates. For tests furnished on or after January 1, 2010, Medicare payments for CDLTs are based upon reported private payor rates. For a CDLT that is assigned a new or substantially revised CPT code, the initial payment rate is assigned using the gap-fill methodology, as under prior law.

On December 20, 2019, President Trump signed the Further Consolidated Appropriations Act, which included the Laboratory Access for Beneficiaries Act, or LAB Act. The LAB Act delayed by one year the reporting of payment data under PAMA for CDLTs that are not ADLTs until the first quarter of 2021. The Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, which was signed into law on March 27, 2020, delayed the reporting period by an additional year, until the first quarter of 2022. Then, on December 10, 2021, Congress passed the Protecting Medicare and American Farmers from Sequester Cuts Act, which included a provision that further delayed the next PAMA reporting period for CDLTs that are not ADLTs to January 1, 2023 through March 31, 2023. The Consolidated Appropriations Act, 2023, enacted on December 29, 2022, delayed the next PAMA reporting period to January 1, 2024 through March 31, 2024. New CLFS rates for CDLTs will be established based on that data beginning in 2025, subject to phase-in limits. As a result, Medicare payment rates determined by data reported in 2017 will continue through December 31, 2026.

In addition, under PAMA, as amended, the payment reduction cap will be 15% per test per year in each of the years 2024 through 2026.

**Rules and Regulations Applicable to Our Research and Development Activities**

We engage in research and development activities, including research and development activities through our wholly owned subsidiary, Fulgent Pharma. Development of therapeutic products is subject to extensive regulation by the FDA and other regulatory agencies. Therapeutic products require government authorization before they may be clinically tested and commercially marketed for

human therapeutic use in the United States and other countries. The precise regulatory requirements with which we will have to comply are undergoing periodic revisions and refinement.

The steps required before a therapeutic product may be marketed in the United States are numerous and include, but are not limited to, the following:

- completion of non-clinical laboratory tests, animal studies, chemical process development, and formulation studies according to good laboratory practices and other applicable regulations and guidance;
- the submission to the FDA of an investigational new drug application, or IND, which must become effective before clinical trials may commence;
- performance of adequate and well-controlled clinical trials according to good clinical practices, or GCPs, to establish the safety and efficacy of the therapeutic candidate for its intended use;
- the submission of a New Drug Application, or NDA, to the FDA;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the therapeutic candidate is produced to assess readiness for commercial manufacturing and conformance to the manufacturing-related elements of the application, to conduct a data integrity audit, and to assess compliance with current Good Manufacturing Practices, or cGMPs, to assure that the facilities, methods and controls are adequate; and
- FDA review and approval of the NDA.

The testing and formulation processes required to market a therapeutic product involves substantial time, effort, and financial resources; and we cannot be certain that any approvals for any of our future therapeutic products will be granted on a timely basis, if at all.

An institutional review board, or IRB, for each institution participating in the clinical trial must review and approve a new clinical protocol before a clinical trial commences at that institution and must also approve the information regarding the trial and the consent form that must be provided to each research subject or the subject's legal representative, monitor the trial until completed, and otherwise comply with IRB regulations. There are also requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries.

Clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1: Initial safety study in healthy human subjects or patients where the candidate therapy is tested for safety, dosage tolerance, absorption, distribution, metabolism, and excretion.
- Phase 2: Studies in a limited patient population designed to identify possible adverse effects and safety risks, to determine the efficacy of the product for specific targeted diseases, and to determine tolerance and optimal dosage.
- Phase 3: Studies in an expanded patient population to further evaluate clinical efficacy and to further test for safety.

We cannot be certain that we will successfully complete Phase 1, Phase 2, or Phase 3 testing of any product candidate within any specific time period, if at all. Post-approval trials, sometimes referred to as "Phase 4" clinical trials, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, FDA may mandate the performance of "Phase 4" clinical trials.

Furthermore, the FDA or the sponsor may suspend clinical trials at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements, or if the therapeutic candidate has been associated with unexpected serious harm to patients.

Assuming successful completion of the required clinical testing, the results of the non-clinical studies and clinical trials, along with detailed descriptions of the product's chemistry, manufacturing and controls (CMC), proposed labeling and other relevant information are submitted to the FDA as part of a NDA requesting approval to market the product. Most innovative drug products obtain FDA marketing approval pursuant to an NDA submitted under Section 505(b)(1) of the FDC Act, commonly referred to as a traditional or "full NDA." In 1984, with passage of the Drug Price Competition and Patent Term Restoration Act, informally known as the Hatch-Waxman Act, that established an abbreviated regulatory scheme authorizing the FDA to approve generic drugs based on an innovator or "reference" product, Congress also enacted Section 505(b)(2) of the FDC Act, which provides a hybrid pathway combining features of a traditional NDA and a generic drug application. Section 505(b)(2) enables the applicant to rely, in part, on the FDA's prior findings of safety and efficacy data for an existing product, or published literature, in support of its application. Section 505(b)(2) NDAs may provide an alternate path to FDA approval for new or improved formulations or new uses of previously

approved products; for example, an applicant may be seeking approval to market a previously approved drug for new indications or for a new patient population that would require new clinical data to demonstrate safety or effectiveness. Section 505(b)(2) permits the filing of an NDA in which the applicant relies, at least in part, on information from studies made to show whether a drug is safe or effective that were not conducted by or for the applicant and for which the applicant has not obtained a right of reference or use. A Section 505(b)(2) applicant may eliminate or reduce the need to conduct certain non-clinical or clinical studies, if it can establish that reliance on studies conducted for a previously-approved product is scientifically appropriate.

Even if a product receives marketing approval, the approval may be limited to specific indications and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings, or precautions be included in the product labeling. The FDA may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a risk mitigation plan, or otherwise limit the scope of any approval. In addition, the FDA may require post marketing clinical trials and/or testing and surveillance programs to monitor the safety of approved products that have been commercialized. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements and FDA review and approval.

Satisfaction of the above FDA requirements or similar requirements of foreign regulatory agencies typically takes several years, and the actual time required may vary substantially, based upon the type, complexity, and novelty of the product or indication. Government regulation may delay or prevent marketing of potential products for a considerable period of time and impose costly procedures upon us or our partners' activities. The FDA or any other regulatory agency may not grant any approvals on a timely basis, if at all. Success in early-stage clinical trials does not assure success in later-stage clinical trials. Data obtained from clinical activities is not always conclusive and may be susceptible to varying interpretations that could delay, limit, or prevent regulatory approval. Even if a product receives regulatory approval, the approval may be significantly limited to specific indications and dosages. Delays in obtaining, or failures to obtain regulatory approvals may have a material adverse effect on our business. In addition, we cannot predict what adverse governmental regulations may arise from future U.S. or foreign governmental action.

Following approval of a new therapeutic product, the manufacturer and the approved product are subject to pervasive and continuing regulation by the FDA, including, among other things, monitoring and record-keeping activities; reporting of adverse experiences with the product, samples, and distribution restrictions; complying with promotion and advertising requirements, which include restrictions on promoting drugs for unapproved uses or patient populations (i.e., "off-label use") and limitations on industry-sponsored scientific and educational activities. Although physicians may prescribe legally available products for off-label uses, manufacturers may not market or promote such uses.

Moreover, if there are any modifications to the product, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA approval of a new NDA or an NDA supplement, which may require the applicant to develop additional data or conduct additional non-clinical studies and clinical trials. Even if such trials are conducted, the FDA may not approve any expansion of the labeled indications for use in a timely fashion, or at all.

In addition, FDA regulations require that products be manufactured in specific approved facilities and in accordance with cGMP. The cGMP regulations include requirements relating to organization of personnel, buildings and facilities, equipment, control of components and drug product containers and closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls, records and reports, and returned or salvaged products. Drug manufacturers and other entities involved in the manufacture and distribution of approved therapeutics are required to register their establishments with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA to assess compliance with cGMP and other requirements. Accordingly, both sponsors and manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance and other aspects of quality control and quality assurance, and to ensure ongoing compliance with other statutory requirements of the FDC Act. We cannot be certain that we or our suppliers will be able to comply with cGMP regulations and other FDA regulatory requirements.

Accordingly, even after a new drug approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained, or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or the imposition of distribution or other restrictions. Other potential consequences of regulatory non-compliance include, among other things, fines, warning letters or other enforcement-related letters or clinical holds on post-approval clinical trials; product seizure or detention, or refusal to permit the import or export of products; injunctions or the imposition of civil or criminal penalties; and/or consent decrees, corporate integrity agreements, debarment, or exclusion from federal health care programs.

**Privacy and Security Laws and Regulations and Patient Information Access Laws and Regulations Applicable to Our Business**

***HIPAA and HITECH***

Under the Administrative Simplification provisions of the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the federal Health Information Technology for Economic and Clinical Health Act, or HITECH, the U.S. Department of Health and Human Services, or HHS, has issued regulations, or HIPAA Regulations, that establish uniform standards governing the conduct of certain electronic healthcare transactions and requirements for protecting the privacy and security of protected health information, or PHI, used or disclosed by healthcare providers, health plans, and healthcare clearinghouses that conduct certain healthcare transactions electronically, known as "covered entities." As a clinical laboratory, we are acting as a covered entity and are subject to HIPAA and HITECH. The following four principal regulations with which we are required to comply have been issued in final form under HIPAA and HITECH: privacy regulations, security regulations, the breach notification rule, and standards for electronic transactions, which establish standards for common healthcare transactions.

The privacy regulations of HIPAA and HITECH protect medical records and other PHI by limiting their use and release, giving patients a variety of rights, including the right to access their medical records, and limiting most disclosures of health information to the minimum amount necessary to accomplish an intended purpose. HIPAA also requires covered entities to enter into business associate agreements to obtain a written assurance of compliance with HIPAA from individuals or organizations who provide services to covered entities involving the use or disclosure of PHI, or also known as "business associates." As a general rule, a covered entity or business associate may not use or disclose PHI, except as permitted under the privacy regulations of HIPAA and HITECH.

Covered entities must also comply with the security regulations of HIPAA and HITECH, which establish requirements for safeguarding the confidentiality, integrity, and availability of electronic PHI. The HIPAA security regulations require the implementation of administrative, physical, and technical safeguards and the adoption of written security policies and procedures.

In addition, HITECH established, among other things, certain breach notification requirements with which covered entities must comply. In particular, a covered entity must report breaches of PHI that have not been encrypted or otherwise secured in accordance with guidance from the Secretary of HHS, or the Secretary. Required breach notices must be made as soon as is reasonably practicable, but no later than sixty days following discovery of the breach. Reports must be made to affected individuals, the Secretary, and, depending on the size of the breach, the local and national media. Covered entities are also subject to audit under HHS's HITECH-mandated audit program and may be investigated in connection with privacy or data security.

There are significant civil and criminal fines and other penalties that may be imposed for violating HIPAA. A covered entity or business associate is liable for civil monetary penalties for a violation that is based on an act or omission of any of its agents, including a downstream business associate, as determined according to the federal common law of agency. Penalties for failure to comply with a requirement of HIPAA and HITECH vary significantly depending on the failure and include civil monetary penalties of up to approximately $1.9 million per violation of the same requirement per calendar year (as of March 2022, subject to annual inflation adjustments). A single breach incident can violate multiple requirements, resulting in potential penalties in excess of $1.9 million. Additionally, a person who knowingly obtains or discloses individually identifiable health information in violation of HIPAA may face a criminal penalty of up to $50,000 and up to one year of imprisonment. These 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. Covered entities are also subject to enforcement by state attorneys general who were given authority to enforce HIPAA under HITECH. Further, to the extent that we submit electronic healthcare claims and payment transactions that do not comply with the electronic data transmission standards established under HIPAA and HITECH, payments to us may be delayed or denied.

In addition to our clinical laboratory services, we provide management and technology services to certain companies, institutions, and agencies that are covered entities and have entered into business associate agreements with these entities as business associates. In addition to being directly responsible for compliance with applicable HITECH Act requirements and HIPAA regulations as a business associate, we have contractually agreed to comply with HITECH and HIPAA Regulations; and in some instances, we have agreed to indemnify our covered entity clients if we breach our obligations with respect to these laws and regulations and/or in the event of a reportable breach of PHI.

***CMIA***

The HIPAA privacy, security, and breach notification regulations establish a uniform federal "floor" but do not supersede state laws that are more stringent or that provide individuals with greater rights with respect to the privacy or security of, and access to, their records containing PHI, or insofar as such state laws apply to personal information that is broader in scope than PHI, as defined under HIPAA. The compliance requirements of these laws, including additional breach reporting requirements, and the penalties for violation vary widely, and new privacy and security laws in this area are evolving. For example, several states, such as California, have implemented comprehensive privacy laws and regulations. The California Confidentiality of Medical Information Act, or CMIA, imposes restrictive requirements regulating the use and disclosure of health information and other personally identifiable information.

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. California's patient privacy laws, for example, provide for penalties of up to $250,000 and permit injured parties to sue for damages.

***CCPA/CPRA***

In addition to the CMIA, California recently adopted the California Consumer Privacy Act of 2018, or CCPA, which came into effect on January 1, 2020. The CCPA established a new privacy framework for covered businesses by creating an expanded definition of personal information, establishing new data privacy rights for California consumers, imposing special rules on the collection of consumer data from minors, and creating a new and potentially severe statutory damages framework for businesses that violate the CCPA and/or fail to implement reasonable security procedures and practices to prevent data breaches. Although the CCPA does not directly apply to medical information covered by HIPAA or CMIA, certain other personal information that our business may collect and use is within the scope of the CCPA and does not fall under the CCPA exception. Additionally, the California Privacy Rights Act, or CPRA, which expanded the CCPA, became effective on January 1, 2023 and, among other things, it established the California Privacy Protection Agency, or CPPA, a new regulatory authority charged with administering and enforcing the CRPA and privacy rights in California. The CPPA has the power to levy fines and bring other enforcement actions and is in the process of implementing further regulations that could have operational impacts. In addition to California, other states have similar privacy laws taking effect in 2023, including Virginia, Colorado, Connecticut, and Utah. There are also several federal privacy proposals under consideration in Congress, and other states have already introduced privacy legislation for consideration in 2023. The CPRA and other state privacy laws could impact our operations or that of our collaborators and business partners and impose new regulatory requirements and increase costs of compliance.

***Information Blocking Rules***

The National Coordinator for Health Information Technology, or ONC, coordinates the ongoing development of standards to enable interoperable health information technology infrastructure nationwide in the healthcare sector. In May 2020, ONC released the final Information Blocking Rule to implement the interoperability and patient access provisions of the 21st Century Cures Act, which took effect in 2021. We need to continually engage in ongoing reviews of all potential practices that could be considered likely to interfere with access, exchange, or use of electronic health information, as those practices are prohibited by the Information Blocking Rule unless one of the exceptions outlined in the Information Blocking Rule applies. Among other things, the Information Blocking Rule requires us to provide patients with on-demand access to laboratory test results. These requirements can be inconsistent with our obligations under state law and/or medical or ethical standards. It is currently unclear how the ONC will approach delays in providing patient access in these situations. Health care providers, including laboratories, are subject to civil monetary penalties for violations of the Information Blocking Rule, up to $1 million per violation.

***Foreign Laws and Other Laws***

We are also subject to foreign privacy laws in the jurisdictions in which we sell our tests. The interpretation, application, and interplay of consumer and health-related data protection laws in the United States, Europe, and elsewhere are often uncertain, contradictory, and in flux. For example, the General Data Protection Regulation, or GDPR, and Cybersecurity Directive have been enacted in the European Union and became effective in May 2018. These regulations introduced many changes to privacy and security in the European Union, including stricter rules on consent and security duties for critical industries, including for the health sector generally and for genetic data specifically. The interpretation of some rules continues to evolve in guidance from the main regulatory authority, the European Data Protection Board, and some requirements may be completed by national legislation. This makes it difficult to assess the impact of these foreign data protection laws on our business at this time. More generally, foreign laws and interpretations governing data privacy and security are constantly evolving, and it is possible that laws may be interpreted and applied in a manner that is inconsistent with our current practices, in which case we could be subject to government-imposed fines or orders requiring that we change our practices. These fines can be very high. For instance, the GDPR provides for fines of up to approximately $22 million or 4% of a group's worldwide annual turnover for certain infringements. In addition, privacy regulations differ widely from country to country and are enforced by individual country data protection authorities, which have power to enforce privacy regulations. Various data protection authorities have issued fines in the millions of euros for violations of privacy laws. Many states have also implemented genetic testing and privacy laws imposing specific patient consent requirements and requirements for protecting test results. 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 legal and regulatory 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. In addition, the interpretation and application of consumer, health-related, and data protection laws are often uncertain, contradictory, and in flux. For example, increasing concerns about health information privacy have recently prompted the federal government to issue guidance, taking a newly expansive view of the scope of the laws and regulations that they enforce. The applicability and requirements of these laws and penalties for violations vary widely. Failure to maintain compliance, or changes in

state or federal laws regarding privacy or security, could result in civil and/or criminal penalties and damages and could have a material adverse effect on our business.

Numerous other federal, state, and foreign laws, including consumer protection laws and regulations, govern the collection, dissemination, use, access to, confidentiality and security of patient health information. In addition, Congress and some states are considering new laws and regulations that further and more broadly protect the privacy and security of medical records or health information. With the recent increase in publicity regarding data breaches resulting in improper dissemination of consumer information, all 50 states have passed laws regulating the actions that a business must take if it experiences a data breach, as defined by state law, including, in certain instances, prompt disclosure within a specified amount of time to affected individuals. Congress has also been considering similar federal legislation relating to data privacy and data protection. The FTC and states' Attorneys General have also brought enforcement actions and prosecuted some data breach cases as unfair and/or deceptive acts or practices under the FTC Act and comparable state laws. In addition to data breach notification laws, some states have enacted statutes and rules requiring businesses to reasonably protect certain types of personal information they hold or to otherwise comply with certain specified data security requirements for personal information. We intend to continue to comprehensively protect all personal information and to comply with applicable laws regarding the protection of such information.

In many activities, including the conduct of clinical trials, we are subject to laws and regulations governing data privacy and the protection of health-related and other personal information. These laws and regulations govern our processing of personal data, including the collection, access, use, analysis, modification, storage, transfer, security breach notification, destruction, and disposal of personal data. We must comply with laws and regulations associated with the international transfer of personal data based on the location in which the personal data originates and the location in which it is processed.

If we or our vendors fail to comply with applicable data privacy laws, or if the legal mechanisms we or our vendors rely upon to allow for the transfer of personal data from the European Union to the United States (or other countries not considered by the European Commission to provide an adequate level of data protection) are not considered adequate, we could be subject to government enforcement actions and significant penalties against us, and our business could be adversely impacted if our ability to transfer personal data outside of the European Union is restricted, which could adversely impact our operating results. The GDPR has increased our responsibility and potential liability in relation to European Union personal data that we process, and we may be required to put in place additional mechanisms to ensure compliance with the GDPR. However, our ongoing efforts related to compliance with the GDPR may not be successful and could increase our cost of doing business. In addition, data protection authorities of the different European Union member states may interpret the GDPR differently, and guidance on implementation and compliance practices is often updated or otherwise revised, which adds to the complexity of processing personal data in the European Union. In addition to the GDPR, other countries have enacted data protection legislation, which increase the complexity of doing international business and transferring sensitive personal information from those countries to the United States.

The privacy and security of personally identifiable information stored, maintained, received, or transmitted, including electronically, is subject to significant regulation in the United States and abroad. While we strive to comply with all applicable privacy and security laws and regulations, legal standards for privacy continue to evolve, and any failure or perceived failure to comply may result in proceedings or actions against us by government entities or others, or could cause reputational harm, which could have a material adverse effect on our business.

**Healthcare Fraud and Abuse Laws Applicable to Our Business**

In the United States, we must comply with various fraud and abuse laws, and we are subject to regulation by various federal, state, and local authorities, including CMS, other divisions of HHS (such as the Office of Inspector General), the U.S. Department of Justice, individual U.S. Attorney's Offices within the Department of Justice, and state and local governments. We also may be subject to foreign fraud and abuse laws.

***Anti-Kickback and Fraud Statutes***

In the United States, the federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, overtly or covertly, in cash or in kind, in order to induce or in return for the referral of an individual for the furnishing of, or the recommending or arranging for the furnishing of, purchasing, leasing, ordering or arranging for or recommending purchasing, leasing or ordering of any good, facility, service or item for which payment may be made in whole or in part by a federal healthcare program. Courts have stated that a financial arrangement may violate the Anti-Kickback Statute if any one purpose of the arrangement is to encourage patient referrals or other federal healthcare program business, regardless of whether there are other legitimate purposes for the arrangement. The definition of "remuneration" has been broadly interpreted to include anything of value, including gifts, discounts, credit arrangements, payments of cash, consulting fees, waivers of co-payments, ownership interests, and providing anything at less than its fair market value. The Anti-Kickback Statute is broad and may technically prohibit many innocuous or beneficial arrangements within the healthcare industry, although it does contain several exceptions. HHS has issued a series of regulatory "safe harbors" setting forth certain provisions that, if met, will immunize the parties to the arrangement from prosecution under the Anti-Kickback Statute. Although full compliance with the statutory exceptions or regulatory safe harbors ensures against prosecution under the federal Anti-Kickback Statute, the failure of a transaction or arrangement to fit within a specific statutory exception or regulatory safe harbor does not necessarily mean that the transaction or arrangement is illegal or that prosecution under the Anti-Kickback Statute will be pursued. Furthermore, 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. Penalties for violations of the Anti-Kickback Statute are severe and include imprisonment, criminal fines, civil monetary penalties, and exclusion from participation in federal healthcare programs. In addition, a violation of the federal Anti-Kickback Statute can serve as a basis of liability under the federal False Claims Act (described below). Many states also have anti-kickback statutes, some of which may apply regardless of payor type.

In addition, in October 2018, the Eliminating Kickbacks in Recovery Act of 2018, or EKRA, was enacted as part of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act. EKRA is an all-payer anti-kickback law that makes it a criminal offense to pay any remuneration to induce referrals to, or in exchange for, patients using the services of a recovery home, a substance use clinical treatment facility, or laboratory. However, unlike the federal Anti-Kickback Statute, EKRA is not limited to services covered by federal or state health care programs but applies more broadly to services covered by "health care benefit programs," including commercial insurers. Although it appears that EKRA was intended to reach patient brokering and similar arrangements to induce patronage of substance use recovery and treatment, the language in EKRA is broadly written. Further, certain of EKRA's exceptions are inconsistent with the federal Anti-Kickback Statute and regulations. Significantly, EKRA permits the U.S. Department of Justice to issue regulations clarifying EKRA's exceptions or adding additional exceptions, but such regulations have not yet been issued.

There are also U.S. federal laws related to healthcare fraud and false statements relating to healthcare matters. The healthcare fraud statute prohibits, among other things, knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private payors. A violation of this statute is a felony and may result in fines, imprisonment or exclusion from government payor programs such as the Medicare and Medicaid programs. The false statements statute prohibits 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. Similar to the federal Anti-Kickback Statute, 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. A violation of this statute is also a felony and may result in fines, imprisonment or exclusion from government payor programs.

***False Claims Act***

Another development affecting the healthcare industry is the increased enforcement of the federal False Claims Act and, in particular, actions brought pursuant to the False Claims Act's "whistleblower" or "qui tam" provisions. The False Claims Act imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment to the federal government. The qui tam provisions of the False Claims Act allow a private individual to bring an action under the False Claims Act on behalf of the federal government and permit such an individual to share in any amounts paid by the entity to the government in fines or settlement. In addition, providers and suppliers must report and return any overpayments received from the Medicare and Medicaid programs within 60 days of identification. Failure to identify and return such overpayments exposes the provider or supplier to False Claims Act liability. When an entity is determined to have violated the False Claims Act, it may be required to pay up to three times the actual damages sustained by the government, plus civil penalties ranging from $5,500 to $11,000 for each false claim, as set by statute. However, the civil penalty amounts are adjusted annually for inflation. For civil penalties assessed after June 19, 2020, whose associated violations occurred after November 2, 2015, the civil penalty amount ranges between $11,665 and $23,331 per claim; as of December 13, 2021, the amounts increased to $11,803 and $23,607 per claim.

In addition, various states have enacted false claim laws analogous to the federal False Claims Act, although many of these state laws apply where a claim is submitted to any third-party payor and not merely a government payor program.

***Civil Monetary Penalties Law***

The federal Civil Monetary Penalties Law, or the CMP Law, prohibits, among other things, (1) the offering or transfer of remuneration to a Medicare or state health care 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 health care program, unless an exception applies; (2) employing or contracting with an individual or entity that the provider knows or should know is excluded from participation in a federal health care program; (3) billing for services requested by an unlicensed physician or an excluded provider; and (4) billing for medically unnecessary services. The penalties for violating the CMP Law include exclusion, substantial fines, and payment of up to three times the amount billed, depending on the nature of the offense.

**Physician Referral Prohibitions Laws and Regulations**

We are also subject to the U.S. federal law directed at "self-referrals," commonly known as the "Stark Law," which prohibits a physician from making referrals for certain designated health services, including laboratory services, that are covered by the Medicare program, to an entity with which the physician or an immediate family member has a direct or indirect financial relationship, unless an exception applies. Violation of the Stark Law results in a denial of payment for any services provided pursuant to a prohibited referral. A physician or entity that engages in a scheme to circumvent the Stark Law's referral prohibition may be subject to substantial fines for each such arrangement or scheme. In addition, any person who presents or causes to be presented a claim to the Medicare program in violation of the Stark Law is subject to substantial civil monetary penalties of up to, an assessment of up to three times the amount claimed and possible exclusion from participation in federal healthcare programs. The Stark Law is a strict liability statute, meaning that a physician's financial relationship with a laboratory must meet an exception under the Stark Law, or the referrals are prohibited. Thus, unlike the Anti-Kickback Statute's safe harbors, if a laboratory's financial relationship with a referring physician does not meet the requirements of a Stark Law exception, then the physician is prohibited from making Medicare and Medicaid referrals to the laboratory and any such referrals will result in overpayments to the laboratory and subject the laboratory to the Stark Law's penalties. A violation of the Stark Law can serve as a basis of liability under the federal False Claims Act. Many states, including California, have comparable laws that are not limited to Medicare referrals. The Stark Law also prohibits state receipt of federal Medicaid matching funds for services furnished pursuant to a prohibited referral, but this provision of the Stark Law has not been implemented by regulations.

**Physician Sunshine Laws Applicable to Our Business**

The Physician Payments Sunshine Act imposes reporting requirements on manufacturers of certain devices, drugs, and biologics for certain payments and transfers of value by them (and in some cases their distributors) to physicians, teaching hospitals, and certain advanced non-physician health care practitioners, as well as ownership and investment interests held by physicians and their immediate family members. The reporting program, known as the Open Payments program, is administered by CMS. Because we manufacture our own LDTs solely for use by or within our own laboratory, we believe we are exempt from these reporting requirements. We may become subject to such reporting requirements under the terms of current CMS regulations, however, if the Verifying Accurate, Leading-edge IVCT Development Act, or VALID Act, or other legislation renders our tests regulated by FDA, or if FDA engages in notice-and-comment rulemaking to exercise authority over LDTs or otherwise requires us to obtain premarket clearance or approval for our tests. We also may become subject to these requirements if any therapeutic products currently in development are successfully approved by FDA and commercialized in the United States.

**Anti-Bribery Laws Applicable to Our Business**

***FCPA***

We are subject to U.S. Foreign Corrupt Practices Act, or 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. The sale of our tests internationally demands a high degree of vigilance in maintaining, implementing and enforcing a policy against participation in corrupt activity. Other U.S. companies in the medical device and pharmaceutical fields have faced substantial monetary fines and criminal penalties under the FCPA for allowing their agents to deviate from appropriate practices in doing business with non-U.S. government officials.

***Foreign Laws***

We are also subject to similar anti-bribery laws in the foreign jurisdictions in which we operate. In Europe, various countries have adopted anti-bribery laws providing for severe consequences, in the form of criminal penalties and/or significant fines for individuals and/or companies committing a bribery offence. For instance, in the United Kingdom, under the Bribery Act of 2010, which became effective in July 2011, a bribery occurs when a person offers, gives, or promises to give a financial or other advantage to induce or reward another individual to improperly perform certain functions or activities, including any function of a public or private nature. Bribery of foreign public officials also falls within the scope of the Bribery Act of 2010. An individual found in

violation of the Bribery Act of 2010 faces imprisonment of up to 10 years and could be subject to an unlimited fine, as could commercial organizations for failure to prevent bribery.

**Healthcare Policy Laws Applicable to Our Business**

In March 2010, the Affordable Care Act, or ACA, was enacted in the United States. The ACA made a number of substantial changes to the way healthcare is financed both by governmental and private payors. Although the ACA included a medical device tax, the tax never went into effect and was fully repealed by Congress with enactment of the 2019 federal spending package signed into law by President Trump on December 20, 2019.

Since the ACA's enactment, there have been judicial and Congressional challenges to certain aspects of the ACA, and as a result, certain sections of the ACA have not been fully implemented or were effectively repealed. However, following several years of litigation in the federal courts, in June 2021, the United States Supreme Court, or the Supreme Court, upheld the ACA when it dismissed a legal challenge to the Act's constitutionality. Further legislative and regulatory changes under the ACA remain possible, although the new Democrat-led presidential administration has been taking steps to strengthen the ACA. Future changes or additions to the ACA, the Medicare and Medicaid programs, and changes stemming from other health care reform measures, especially with regard to health care access, financing or other legislation in individual states, could have a material adverse effect on the health care industry in the U.S. The uncertainty around the future of the ACA, and in particular the impact to reimbursement levels and the number of insured individuals, may lead to delay in the purchasing decisions of our customers.

In addition to the ACA, there will likely continue to be proposals by legislators at both the federal and state levels, regulators and private third-party payors to reduce costs while expanding individual healthcare benefits. For example, in August 2022, President Biden signed into the law the Inflation Reduction Act of 2022, or the IRA. Among other things, the IRA has multiple provisions that may impact the prices of drug products that are both sold into the Medicare program and throughout the United States. Starting in 2023, a manufacturer of drugs or biological products covered by Medicare Parts B or D must pay a rebate to the federal government if their drug product's price increases faster than the rate of inflation. This calculation is made on a drug product by drug product basis and the amount of the rebate owed to the federal government is directly dependent on the volume of a drug product that is paid for by Medicare Parts B or D. Additionally, starting for payment year 2026, CMS will negotiate drug prices annually for a select number of single source Part D drugs without generic or biosimilar competition. CMS will also negotiate drug prices for a select number of Part B drugs starting for payment year 2028. If a drug product is selected by CMS for negotiation, it is expected that the revenue generated from such drug will decrease.

**Prohibitions on the Corporate Practice of Medicine**

Numerous states have enacted laws prohibiting business corporations, such as us, from practicing medicine and employing or engaging physicians to practice medicine, generally referred to as the prohibition against the corporate practice of medicine. These laws are designed to prevent interference in the medical decision-making process by anyone who is not a licensed physician. For example, California's Medical Board has indicated that determining the appropriate diagnostic tests for a particular condition and taking responsibility for the ultimate overall care of a patient, including providing treatment options available to the patient, would constitute the unlicensed practice of medicine if performed by an unlicensed person. Violation of these corporate practice of medicine laws may result in civil or criminal fines, as well as sanctions imposed against the business corporation and/or the professional through licensure proceedings.

**Environmental and Other Regulatory Requirements**

Our facilities are subject on an ongoing basis to federal, state, and local laws and regulations governing the use, storage, handling, and disposal of regulated medical waste, hazardous waste, and biohazardous waste, including chemicals, biological agents and compounds and blood and other tissue specimens. Typically, we use licensed or otherwise qualified outside vendors to dispose of this waste. However, many of these laws and regulations provide for strict liability, holding a party potentially liable without regard to fault or negligence. As a result, we could be held liable for damages and fines if our, or others', business operations or other actions result in contamination of the environment or personal injury due to exposure to hazardous materials. Our costs for complying with these laws and regulations cannot be estimated or predicted and depends on a number of factors, including the amount and nature of waste we produce, which depends in part on the number of tests we perform, and the terms we negotiate with our waste disposal vendors.

Our operations are also subject to extensive requirements established by the U.S. Occupational Safety and Health Administration relating to workplace safety for healthcare employees, including requirements to develop and implement programs to protect workers from exposure to blood-borne pathogens by preventing or minimizing any exposure through needle stick or similar penetrating injuries.

## Employees and Human Capital Resources

We believe growing and retaining a strong team is crucial to our success. As of February 15, 2023, we had 1,012 full-time employees, engaged in bioinformatics, genetic, COVID-19 and molecular testing, software engineering, laboratory management, sales and marketing, and corporate and administrative activities. Consistent with our core belief in the values of diversity and inclusion, as of December 31, 2022, underrepresented minorities (which include women, Asian, and Hispanic persons) made up 50% or more of each major level of our organization, including our board of directors, senior management, and rank and file staff. To encourage the professional and personal development of every Fulgent employee, we offer reimbursement for qualified educational expenses and successful completion of undergraduate, graduate, post-graduate, professional training, and licensure courses from accredited colleges, universities, and professional organizations. We also provide mandatory training courses on a variety of topics, including discrimination, harassment, HIPAA, insider trading, anti-corruption and anti-bribery internally and/or through third-party providers. We offer a comprehensive compensation program that is designed to attract and reward talented individuals who possess the skills necessary to support our business objectives, assist in the achievement of our strategic goals and create long-term value for our stockholders. We provide competitive salaries, stock-based compensation, and bonus programs. We also provide an expansive benefit offering including medical, dental, and vision health care coverage, life and AD&D coverage; optional legal, pet insurance, hospitalization, critical illness and accident coverage; insurance and disability coverage; 401(k) investment plans with Company matching; tax-advantaged savings accounts; paid time off and leaves of absence; and wellness programs. We provide added work life balance to our employees through hybrid work arrangements. None of our employees are represented by a labor union or covered by collective bargaining agreements, and we believe our relationship with our employees is good.

The following persons currently serve as the directors and executive officers of Fulgent:

| Directors and Executive Officers | Position |
|---|---|
| Ming Hsieh | Chairman of the Board of Directors and Chief Executive Officer |
| Paul Kim | Chief Financial Officer |
| Hanlin (Harry) Gao, M.D., Ph.D., D.A.B.M.G., F.A.C.M.G. | Chief Scientific Officer |
| Jian (James) Xie | President and Chief Operating Officer |
| Regina (Reggie) Groves | Non-Employee Director |
| Linda Marsh | Non-Employee Director |
| Michael Nohaile, Ph.D. | Non-Employee Director |

## Corporate Information

We were incorporated in Delaware on May 13, 2016. We are the holding company of our subsidiaries, including primarily Fulgent Therapeutics LLC, which was initially formed in June 2011. On September 30, 2016, Fulgent Therapeutics LLC became our wholly owned subsidiary in a transaction we refer to as the Reorganization, in which the holders of all equity interests in Fulgent Therapeutics LLC immediately prior to the Reorganization became all of our stockholders immediately following the Reorganization.

Our headquarters are located at 4978 Santa Anita Avenue, Temple City, California 91780, and our telephone number is (626) 350-0537. Our website address is *www.fulgentgenetics.com*. The information contained on or that can be accessed through our website is not part of and is not incorporated into this report by this reference.

## Available Information

We file reports with the Securities and Exchange Commission, or the SEC, and make available, free of charge, on or through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy and information statements and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC on their website located at www.sec.gov.

**Item 1A. Risk Factors.**

**Summary Risk Factors**

Investing in our common stock involves a high degree of risk. Before making any investment decision with respect to our common stock, you should carefully consider the risks described below, together with the other risk factors set forth in this Item 1A, all other information included in this report, and the other reports and documents filed by us with the SEC. The risk factors described below are a summary of the principal risk factors associated with an investment in us.

**Business and Strategy Risks**

- Our results of operations may fluctuate significantly from period to period and can be difficult to predict.
- We have a history of losses, and we may not be able to sustain profitability. We anticipate that revenues resulting from our COVID-19 testing will continue to decrease as and if the prevalence of COVID-19 decreases.
- We may not be successful in our efforts to integrate any acquired businesses and technologies, and this may adversely affect our business and results of operations. We may incur unexpected liabilities as a result of our acquisitions.
- Actual or attempted security breaches, loss of data, or other disruptions could expose us to material liability and materially and adversely affect our business and our reputation.
- If our laboratory facilities become inoperable, if we are forced to vacate a facility, or if we are unable to obtain additional laboratory space as and when needed, we would be unable to perform our tests, and our business would be harmed.
- We depend on our information technology systems and any material failure of these systems, due to hardware or software malfunctions, delays in operation, and/or material failures to implement new or enhanced systems or cybersecurity breaches, could materially harm our business.
- Any inability to obtain additional capital when needed and on acceptable terms may limit our ability to execute our business plans, and our liquidity needs could be materially affected by market fluctuations and general economic conditions.

**Reimbursement Risks**

- Our ability to achieve or sustain profitability also depends on our collection of payment for the tests we deliver, which we may not be able to do successfully
- Failure to comply with government laws and regulations related to submission of claims for our services could result in significant monetary damages and penalties and exclusion from the Medicare and Medicaid programs and corresponding foreign reimbursement programs.

**Regulatory Risks**

- Any changes in laws, regulations or the enforcement discretion of the FDA with respect to the marketing of diagnostic products, or violations of laws or regulations by us, could materially and adversely affect our business, prospects, results of operations or financial condition.
- If we fail to comply with applicable federal, state, local and foreign laboratory licensing requirements, we could lose the ability to perform our tests or experience material disruptions to our business.
- We are subject to broad legal requirements regarding the information we test and analyze, and any failure to comply with these requirements could result in materially significant, penalties, materially damage our reputation and materially harm our business.
- We conduct business in a heavily regulated industry. Complying with the numerous statutes and regulations pertaining to our business is expensive and time-consuming, and any failure by us, our consultants or commercial partners to comply could result in substantial and material penalties.
- We may be required to modify our business practices, pay fines, incur significant expenses or experience losses due to litigation or governmental investigations.

**Risk Related to the Development of Therapeutic Candidates**

- Fulgent Pharma’s therapeutic candidates are in early stages of development and may fail or suffer delays that materially and adversely affect their future commercial viability.
- Any therapeutic product candidate that Fulgent Pharma may attempt to develop, manufacture or market in the United States will be subject to extensive regulation by the FDA, including regulations relating to development, preclinical testing, performance of clinical trials, manufacturing and post-approval commercialization and will be subject to extensive

regulations outside of the United States. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. The time required to obtain FDA approval, and any other required approvals for pharmaceutical products, including any accelerated approval, is unpredictable but typically requires years to several years and may never be obtained.

**Intellectual Property Risks**

- We primarily rely on trade secret protection, non-disclosure agreements, and invention assignment agreements to protect our proprietary information, which may not be effective.
- Litigation or other proceedings or third-party claims of intellectual property infringement or misappropriation could require us to spend significant time and money and prevent us from selling our tests or developing therapeutic candidates.
- If we fail to comply with our obligations under license or technology agreements with third parties, we could lose license rights that are critical to our business. If our third-party licensors fail to comply with the terms of our license arrangements, we may be forced to engage in litigation to protection our rights, which may not be successful.

**Common Stock Risks**

- An active, liquid trading market for our common stock may not be sustained, which could make it difficult for stockholders to sell their shares of our common stock.
- The price of our common stock may be volatile, and you could lose all or part of your investment.
- Future issuances of our common stock or rights to purchase our common stock, including pursuant to our equity incentive plan, could result in additional dilution to the percentage ownership of our stockholders and could cause the price of our common stock to fall.
- We do not intend to pay dividends on our common stock, so any returns will be limited to the value of our common stock.

**Business and Strategy Risks**

**Our results of operations may fluctuate significantly from period to period and can be difficult to predict.**

Our results of operations have experienced fluctuations from period to period, which we expect may continue in the future. These fluctuations can occur because of a variety of factors, including, among others, the amount and timing of sales of our tests and testing services, the prices we charge for our tests and testing services, customer or payor mix, general price degradation for our tests and testing services or other competitive factors, the rate and timing of our billings and collections, and the timing and amount of our commitments and other payments, as well as the other risk factors discussed in this report. Our results have been, and may in the future be, impacted by events that may not recur regularly, in the same amounts or at all in the future. For instance in 2020, we developed and began offering a series of COVID-19 tests. We experienced substantial revenue growth in recent years due primarily to the sales of, and growing demand, for these COVID-19 tests. We expect demand for these tests to continue to decline when and as the pandemic recedes. This recent growth and other fluctuations in our operating results may render period-to-period comparisons less meaningful, and investors should not rely on the results of any one period as an indicator of future performance. These fluctuations in our operating results could cause our performance in any particular period to fall below the expectations of securities analysts or investors or guidance we have provided to the public, which could negatively affect the price of our common stock.

**We have a history of losses, and we may not be able to sustain profitability. We anticipate that revenues resulting from our COVID-19 testing will continue to decrease as and if the prevalence of COVID-19 decreases.**

We have a history of losses. Although we achieved profitability for the years ended December 31, 2020, 2021 and 2022, we may not be able to maintain profitability in future periods. Further, our revenue levels may not grow at historical rates or at all. We may incur additional losses in the future. While we experienced significant profitability in connection with the sale of our COVID-19 tests, the demand for these tests has declined and we anticipate will continue to decrease as the prevalence of COVID-19 decreases. Even if there is a reoccurrence of demand for our COVID-19 tests, we may be unable to again manage our resources to effectively respond to this demand such that our revenues will again materially increase. Any future losses may have an adverse effect on our stockholders' equity and working capital, which could negatively impact our operations and your investment in the Company. A failure to sustain or grow our revenue levels and to maintain profitability may negatively affect our business, financial condition, results of operations and cash flows, and could cause the market price of our common stock to decline.

**We may not be successful in our efforts to integrate any acquired businesses and technologies, and this may adversely affect our business and results of operations. We may incur unexpected liabilities as a result of our acquisitions.**

Our ability to integrate any organizations or technology that we may acquire, including our acquisitions of CSI, Fulgent Pharma, and Inform Diagnostics, is subject to a number of risks, including the following:

- failure to integrate successfully the personnel, information systems, technology, and operations of the acquired business;
- failure to maximize the potential financial and strategic benefits of the acquisition;
- failure to realize the expected synergies of the acquired business;
- possible impairment of relationships with employees and clients as a result of any integration of new businesses and management personnel;
- impairment of goodwill;
- increased demand on human resources and operating systems, procedures and controls; and
- reductions in future operating results as a result of the amortization of intangible assets.

Acquisitions are also accompanied by the risk that obligations and liabilities of an acquired business may not be adequately reflected in the historical financial statements of that business and the risk that historical financial statements may be based on assumptions, which are incorrect or inconsistent with our assumptions or approach to accounting policies. The acquisition and integration of businesses may not be managed effectively and any failure to manage the integration process could lead to disruptions in the overall activities of the Company, a loss of clients and revenue and increased expenses. Further, integration of an acquired business or technology could involve significant difficulties and could require management and capital resources that otherwise would be available for ongoing development of our existing business or pursuit of other opportunities. We may also acquire contingent liabilities in connection with the acquisitions of a business, which may be material, and any estimates we might make regarding any acquired contingent liabilities and the likelihood that these liabilities will materialize could differ materially from the liabilities actually incurred. These circumstances could materially harm our business, results of operations and prospects.

**We have previously and may again in the future acquire businesses or assets, form joint ventures, make investments in other companies or technologies, or establish other strategic relationships, any of which could harm our operating results or dilute our stockholders' ownership.**

As part of our business strategy, we have previously and may again in the future pursue acquisitions of complementary businesses or assets (such as our acquisitions of CSI, Fulgent Pharma, and Inform Diagnostics), investments in other companies (such as our investment in Helio Health), technology licensing arrangements, joint ventures, or other strategic relationships. As an organization, we have relatively limited experience with respect to acquisitions, investments, or the formation of strategic relationships or joint ventures. If we pursue relationships with strategic partners or other strategic relationships, our ability to establish and maintain these relationships could be challenging due to several factors. Factors include competition with other testing companies and internal and external constraints placed on pharmaceutical and other organizations that limit the number and type of relationships they can establish with companies like ours. Moreover, we may not be able to identify or complete any future acquisition, investment, technology license, joint venture, or other strategic relationship in a timely manner, on a cost-effective basis or at all, and we may not realize the anticipated benefits of any acquisition, investment, or joint venture as needed to recoup our costs.

To finance any acquisitions, investments, joint ventures or other strategic relationships, we may seek to raise additional funds through securities offerings, credit facilities, asset sales or collaborations or licensing arrangements. To the extent these financing transactions call for the issuance of shares of our capital stock, our existing stockholder would experience dilution in their relative ownership of shares of our capital stock. Each of these methods of fundraising is subject to a variety of risks, including those discussed above under "Any inability to obtain additional capital when needed and on acceptable terms may limit our ability to execute our business plans, and our liquidity needs could be materially affected by market fluctuations and general economic conditions." Further, additional funds from capital-raising transactions may not be available when needed, on acceptable terms or at all. Any inability to fund any acquisitions, investments or strategic relationships we pursue could cause us to forfeit opportunities we believe are promising or valuable, which could harm our prospects.

**Our mix of customers fluctuates from period to period, and our revenue is often concentrated among only a small number of customers, and the loss of or a reduction in sales to any of our customers could materially harm our business.**

The composition and concentration of our customer base often fluctuates from period to period, and in certain prior periods, a small number of customers accounted for a significant portion of our revenue. When customers who, to our knowledge, are under common control or otherwise affiliated with each other are aggregated, one customer, the County of Los Angeles, contributed 19% of our total revenue during the year ended December 31, 2022. For these customers and for customers generally, tests are purchased on a test-by-test basis and not pursuant to any long-term purchasing arrangements. As a result, any or all of our customers, including affiliated customers or customers under common control who purchase large quantities of tests, could decide at any time to decrease, delay, or discontinue their orders from us which could adversely affect our revenue. We believe some of these fluctuations in customer demand may be attributable, in part, to the nature of our business. Our traditional genetic testing customers can experience significant volatility in their genetic testing demand from period to period in the ordinary course of their operations. These demand fluctuations, particularly for any key customers, often have a significant impact on our period-to-period performance regardless of their cause. In addition, the failure to receive payment on a timely basis negatively impacts our results and cash flows. Our ability to maintain or increase sales to our existing customers depends on a variety of factors, including the other risk factors discussed in this report, many of which are beyond our control. Because of these and other factors, sales to any of our customers, including any key, affiliated, or commonly controlled customers, may not continue in the amounts or at the rates as they have in the past, and such sales may never reach or exceed historical levels in any future period. The loss of any of our customers, or a reduction in orders or difficulties collecting payments for tests ordered by any of them, could significantly reduce our revenue and adversely affect our operating results.

**We face intense competition, which could intensify further in the future, and we may fail to maintain or again increase our revenue levels or sustain profitability if we cannot compete successfully.**

We operate our business in very competitive and evolving fields. Our competitors include dozens of companies focused on pathology, genetic, and diagnostic testing services, including specialty and reference laboratories that offer traditional single-gene and multi-gene tests. As such, we face intense competition from other life science, biotechnology, pharmaceutical, research and development, and diagnostic companies. This competition is subject to rapid change, could be significantly affected by new product or testing introductions and may intensify further in the future. While we believe that we compare favorably to these competitors, some of our competitors may have technical, competitive, or other advantages over us for the development of technologies and processes or greater experience in particular diagnostics or therapeutic development areas, and consolidation among pharmaceutical, diagnostic, and biotechnology companies can enhance such advantages.

Many of our competitors have longer operating histories, larger customer bases, more expansive brand recognition and deeper market penetration, substantially greater financial, technological and research and development resources and selling and marketing capabilities and considerably more experience dealing with third-party payors. As a result, they may be able to respond more quickly to changes in customer requirements or preferences, develop faster and better advancements for their technologies and tests, create and implement more successful strategies for the promotion and sale of their tests, obtain more favorable results from third-party payors regarding coverage and reimbursement for their offerings, adopt more aggressive pricing policies for their tests, secure supplies from vendors on more favorable terms or devote substantially more resources to infrastructure and systems development. In addition, competitors may be acquired by, receive investments from or enter into other commercial relationships with larger, well-established and well-financed companies. We may not be able to compete effectively against these organizations. If we are unable to compete effectively, this could have a material adverse effect on our business and results of operations.

**Actual or attempted security breaches, loss of data, or other disruptions could expose us to material liability and materially and adversely affect our business and our reputation.**

In the ordinary course of our business, we generate, collect and store sensitive data, including PHI, personally identifiable information, intellectual property, and proprietary and other business-critical information, such as research and development data, commercial data, and other business and financial information. We manage and maintain the data we generate, collect and store utilizing a combination of on-site systems and managed data center systems. We also communicate sensitive patient data when we deliver reports summarizing test results to our customers, which we deliver via our online encrypted web portal, encrypted email, or fax, or overnight courier. The secure processing, storage, maintenance and transmission of this information is vital to our operations and business strategy, and we devote significant resources to protecting the confidentiality and integrity of this information. Although we have implemented security measures and other controls designed to protect sensitive information from unauthorized access, use, or disclosure, one of our subsidiaries has experienced security incidents to its information systems that resulted in the unauthorized access, use, and disclosure of PHI and other confidential information. To date, these incidents have not materially affected our business. A breach or interruption could result in material legal claims or proceedings and could result in material liability or penalties under federal, state, or foreign laws that protect the privacy of personal information, discussed below under “We are subject to broad legal requirements regarding the information we test and analyze, and any failure to comply with these requirements could result in materially significant, penalties, materially damage our reputation and materially harm our business.” Additionally, unauthorized

access, manipulation, loss, or dissemination could significantly damage our reputation and disrupt our operations, including our ability to perform our tests, analyze and provide test results, bill customers or other payors, process claims for reimbursement, provide customer service, conduct research and development activities, collect, process, and prepare company financial information, conduct education and outreach activities and manage the administrative aspects of our operations, as described further below under "We depend on our information technology systems and any material failure of these systems, due to hardware or software malfunctions, delays in operation, and/or material failures to implement new or enhanced systems or cybersecurity breaches, could materially harm our business."

**If our laboratory facilities become inoperable, if we are forced to vacate a facility, or if we are unable to obtain additional laboratory space as and when needed, we would be unable to perform our tests and our business would be harmed.**

We perform our tests at our CLIA-certified laboratories in Temple City and El Monte, California; Irving, Texas; Needham, Massachusetts; Phoenix, Arizona; Alpharetta, Georgia; and New York, New York. Our laboratories and the equipment we use to perform our tests would be costly to replace and could require substantial lead time to replace and qualify for use. Additionally, any other laboratory facilities or equipment we may use could be damaged or rendered inoperable by natural disasters, which may be exacerbated by the effects of climate change, or man-made disasters which could render it difficult or impossible for us to perform our tests for some period of time. The inability to perform our tests or the backlog that could develop if a laboratory becomes inoperable for even a short time could result in the loss of customers or harm to our reputation. Although we maintain insurance for damage to our property and disruption of our business, this insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, if at all.

Further, if we need to relocate from one laboratory facility to another laboratory facility or obtain additional laboratory space, we may have difficulty locating suitable space in a timely manner, on reasonable terms or at all. Even if acceptable space was available, it would be challenging, time-consuming, and expensive to obtain or transfer the licensure and accreditation required for a commercial laboratory like ours and the equipment used to perform our tests. These challenges could be amplified if we or our joint ventures or other commercial partners seek to procure and maintain laboratory space outside the United States as we pursue international expansion. If we are unable to obtain or are delayed in obtaining new laboratory space as needed, we may not be able to provide our existing tests or develop and launch new tests, which could result in harm to our business, reputation, financial condition and results of operations.

**We rely on commercial courier delivery services to transport specimens to our laboratory facilities in a timely and cost-efficient manner, and if these delivery services are disrupted, our business could be materially harmed.**

Our business depends on our ability to quickly and reliably deliver test results to our customers. We typically receive specimens from customers within days of shipment, or in some cases overnight, for analysis at our laboratory facilities. Disruptions in delivery service, whether due to labor disruptions, bad weather or natural disasters (including severe weather, fires or other natural events which may be exacerbated by climate change), pandemics or epidemics, terrorist acts or threats or for other reasons, could adversely affect specimen integrity and our ability to process specimens in a timely manner and otherwise service our customers, and ultimately materially and adversely affect our reputation and our business. In addition, if we are unable to continue to obtain expedited delivery services on commercially reasonable terms, our operating results may be materially and adversely affected.

**We depend on our information technology systems and any material failure of these systems, due to hardware or software malfunctions, delays in operation, and/or material failures to implement new or enhanced systems or cybersecurity breaches, could materially harm our business.**

We depend on information technology and telecommunications systems for significant elements of our operations, such as our laboratory information management systems, including test validation, specimen tracking and quality control; our bioinformatics analytical software systems; our reference library of information relating to genetic variants and their role in disease; personal information storage, maintenance, and transmission; our customer-facing web-based portal and customer service functions; our report production systems; our billing and reimbursement procedures; our scientific and medical data analysis and other research and development activities and programs; and our general and administrative activities, including disclosure controls, internal control over financial reporting and other public reporting functions. In addition, our third-party service providers depend on technology and telecommunications systems in order to provide contracted services for us. We expect we will need to continue to expand and strengthen a number of enterprise software systems that affect a broad range of business processes and functions, particularly if and as our operations grow, including, for example, systems handling human resources, financial and other disclosure controls and reporting, customer relationship management, regulatory compliance, security controls, and other infrastructure functions.

Information technology and telecommunications systems are vulnerable to disruption and damage from a variety of sources, including power outages and other telecommunications or network failures, natural disasters, and the outbreak of war or acts of terrorism. Breaches resulting in the compromise, disruption, degradation, manipulation, loss, theft, destruction, or unauthorized

disclosure of sensitive information can occur in a variety of ways, including but not limited to, negligent or wrongful conduct by employees or former employees or others with permitted access to our information technology systems and information, or wrongful conduct by hackers, competitors, or certain governments. Our third-party vendors and business partners face similar risks. Moreover, despite network security and back-up measures, our servers and other electronic systems are vulnerable to cybersecurity breaches, such as physical or electronic break-ins, computer viruses, ransomware attacks, phishing schemes, and similar disruptive events. Despite the precautionary measures we have taken to detect and prevent or solve problems that could affect our information technology and telecommunications systems, one of our subsidiaries has experienced security incidents to its information systems that resulted in the unauthorized access, use, and disclosure of PHI and other confidential information. To date, these incidents have not materially affected our business, however such incidents could cause significant downtime or failures of our systems or those used by our third-party service providers. Cyber-attacks come in many forms, including the deployment of harmful malware or ransomware, exploitation of vulnerabilities, phishing, and other use of social engineering, and other means to compromise the confidentiality, integrity, and availability of our IT systems and confidential information. The techniques used by criminal elements to attack computer systems are sophisticated, change frequently and may originate from less regulated or remote areas of the world. Although we carry property, business interruption, and cyber liability insurance, the coverage may not be adequate to compensate for all losses that may occur in the event of system downtime or failure. Any such disruption or loss of information technology or telecommunications systems on which critical aspects of our operations depend could have a material adverse effect on our business and our reputation.

Additionally, if and as our business grows, we will need to continually improve and expand the scope of our technology systems in order to maintain their adequacy for the scale of our operations. Any failure to make such improvements or any significant delay in the planned implementation of new or enhanced systems could render our systems obsolete or inadequate, in which case our service to our customers and our other business activities could suffer, and we could be more vulnerable to electronic breaches from outside sources.

If our computer systems are compromised, we could be subject to significant fines, damages, reputational harm, litigation and enforcement actions, and we could lose trade secrets, the occurrence of which could materially harm our business, in addition to possibly requiring substantial and material expenditures of resources to remedy.

**We rely on a limited number of suppliers and, in some cases, a sole supplier, for certain laboratory substances, equipment and other materials, and any delays or difficulties securing these materials could disrupt our laboratory operations and materially harm our business.**

We rely on a limited number of suppliers for certain laboratory substances used in the chemical reactions incorporated into our tests and testing services, which we refer to as reagents, as well as for the sequencers, collection kits, and various other equipment and materials we use in our laboratory operations. In particular, we rely on Illumina, Inc. as the sole supplier of the next generation sequencers and associated reagents we use to perform our genetic tests and as the sole provider of maintenance and repair services for these sequencers; on Roche Holdings AG for certain laboratory equipment, supplies and services for our immunohistochemistry services; on Beckman Coulter Diagnostics for certain laboratory equipment, supplies and services for our flow cytometry tests and testing services; and on Abbott laboratories for certain laboratory equipment, supplies and services for our FISH tests and testing services. We do not have long-term agreements with most of our suppliers and, as a result, they could cease supplying these materials and equipment generally to us at any time due to an inability to reach agreement with us on supply terms, disruptions in their operations, a determination to pursue other activities or lines of business, or they could fail to provide us with sufficient quantities of materials that meet our specifications, among other reasons. These suppliers may also be affected by natural disasters such as extreme weather events, fires or flooding (which may be exacerbated as a result of climate change), pandemics and health events, and disruptions of the global supply chain. While there are several sequencer suppliers that we believe could replace Illumina, and while we believe that we have sufficient alternative suppliers for our other needs, transitioning to a new supplier or locating a temporary substitute, if any are available, would be time-consuming and expensive, could result in interruptions in or otherwise affect the performance specifications of our laboratory operations or could require that we revalidate our tests. In addition, the use of equipment or materials provided by a replacement supplier could require us to alter our laboratory operations and procedures. Moreover, we believe there are currently only a few manufacturers that are capable of supplying and servicing certain equipment and other materials necessary for our laboratory operations, including sequencers and various associated reagents. As a result, replacement equipment and materials that meet our quality control and performance requirements may not be available on reasonable terms, in a timely manner or at all. If we encounter delays or difficulties securing, reconfiguring or revalidating the equipment, reagents and other materials required for our tests our operations could be materially disrupted; and our business, financial condition, results of operations and reputation could be adversely affected.

**The loss of any member of our senior management team could adversely affect our business.**

Our success depends in large part on the skill, experience, and performance of our executive management team and others in key leadership positions, especially Ming Hsieh, our founder, Chief Executive Officer and Chairman of our board of directors; Paul

Kim, our Chief Financial Officer; Dr. Han Lin Gao, our Chief Scientific Officer and Laboratory Director; and Jian Xie, our Chief Operating Officer. The continued efforts of these persons will be critical to us as we continue to develop our technologies and focus on growing our business. If we lose one or more of these key executives, we could experience difficulties maintaining our operations, including our ability to compete effectively, advance our technologies, develop new tests and implement our business strategies. All of our executives and employees, including Messrs. Hsieh, Kim, and Xie, and Dr. Gao, are at-will, meaning either we or the executive may terminate his employment at any time. We do not carry key person insurance for any of our executives or other employees. In addition, we do not have long-term retention agreements in place with any of our executives or key employees.

**We rely on highly skilled personnel in a broad array of disciplines, and if we are unable to hire, retain, or motivate these individuals, we may not be able to maintain the quality of our tests or grow our business.**

Our business, including our research and development programs, laboratory operations, and administrative functions, largely depend on our continued ability to identify, hire, train, motivate, and retain highly skilled personnel for all areas of our organization, including biostatisticians, geneticists, software engineers, laboratory directors, and specialists, sales, and marketing experts and other scientific, technical, and managerial personnel. Competition in our industry for qualified executives and other employees is intense, and we may not be able to attract or retain the qualified personnel we need to execute our business plans due to high levels of competition for these personnel among our competitors, other life science businesses, universities and public and private research institutions. In addition, our compensation arrangements may not be successful in attracting new employees and retaining and motivating our existing employees. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience constraints that could adversely affect our ability to expand our business and support our clinical laboratory operations, and our sales and marketing and research and development efforts, which would negatively affect our prospects for future growth and success.

**Our reputation and business could be damaged by negative publicity.**

We have been and may again be subject to negative publicity. Reputational risk, including as a result of negative publicity, is inherent in our business. Negative publicity can result from actual or alleged conduct in a number of areas, including legal and regulatory compliance, corporate governance, litigation, inadequate protection of health information, illegal or unauthorized acts taken by third parties that supply products or services to us, and the conduct of our employees or agents. In particular, COVID-19 has been a politically controversial topic, and our provision of COVID-19 testing and related services has subjected us to negative publicity. Negative publicity can damage our reputation and business even if these statements about us are untrue. Damage to our reputation could adversely impact our ability to attract new and to maintain existing customers, employees, and business relationships. This damage and these circumstances may have a material adverse effect on our financial condition, prospects and results of operations.

**We may not be successful in developing and marketing new tests, which could negatively impact our performance and prospects.**

We believe our future success will depend in part on our ability to continue to expand our test and testing service offerings and develop and sell new tests and testing services and on our ability to expand our presence in new and existing markets, including our presence in the molecular diagnostic and cancer testing markets. We may not be successful in launching or marketing any new tests we may develop; in expanding into any new or existing markets; and, even if we are successful, the demand for our tests could decrease or may not continue to increase at historical rates due to resulting sales of any new tests. Development of new tests is time-consuming and costly, as development and marketing of new tests requires us to conduct research and development activities regarding the new tests and to further scale our laboratory processes and infrastructure to be able to analyze increasing amounts of more diverse data. Further, we may be unable to discover or develop and launch new tests for a variety of reasons, including failure of any proposed test to perform as expected, lack of validation or reference data for the test or failure to demonstrate the utility of the test. Any new test we are able to discover and develop may not be launched in a timely manner, meet applicable regulatory standards, successfully compete with other technologies and available tests, avoid infringing the proprietary rights of others, achieve coverage and adequate reimbursement from third-party payors, be capable of performance at commercial levels and at reasonable costs, be successfully marketed, or achieve sufficient market acceptance for us to recoup our time and capital investment in the development of the test. Any failure to successfully develop, market, and sell new tests could negatively impact our ability to attract and retain customers, our revenue and prospects.

**We are exposed to additional business, regulatory, political, operational, financial, and economic risks related to our international operations.**

Our existing customer base includes international customers from a variety of geographic markets. As part of our strategy, we aim to increase our volume of direct sales to international customers in a variety of markets by conducting targeted marketing outreach activities and, if opportunities arise, engaging distributors or establishing other types of arrangements, such as additional joint ventures

or other relationships. However, we may never be successful in achieving these objectives, and even if we are successful, these strategies may not result in meaningful or any increases in our customer base, test volumes or revenue.

Doing business internationally involves a number of risks, including, among others:

- compliance with the laws and regulations of multiple jurisdictions, which may be conflicting or subject to increasing stringency or other changes, including privacy and data protection regulations, tax laws, employment laws, healthcare regulatory requirements, and other related approvals, including permitting and licensing requirements;
- logistics associated with the shipment of blood or other tissue specimens, including infrastructure conditions, transportation delays, and the impact of U.S. and local laws and regulations, such as export and import restrictions, tariffs, or other charges and other trade barriers, all of which involve increased risk related to the trade policies of the current administration, which may threaten existing and proposed trade agreements and impose more restrictive U.S. export-import regulations that impact our business;
- limits on our ability to penetrate international markets, including legal and regulatory requirements that would force us to conduct our tests locally by building additional laboratories or engaging in joint ventures or other relationships in order to offer our tests in certain countries, which relationships could involve significant time and resources to establish, deny us control over certain aspects of the foreign operations, or reduce the economic value to us of these operations;
- failure by us, any joint venturers, or other arrangements we have or may establish, or by any distributors or other commercial partners we have engaged or may engage to obtain any regulatory approvals required to market, sell, and use our tests in various countries;
- challenges predicting the market for our tests and services generally and tailoring our test menu to meet varying customer expectations in different countries and territories;
- difficulties gaining market share in territories in which we do not have a strong physical presence or brand awareness;
- complexities and difficulties obtaining protection for and enforcing our intellectual property rights;
- difficulties in staffing and managing foreign operations;
- complexities associated with managing multiple payor coverage and reimbursement regimes, government payors, or patient self-pay systems;
- financial risks, such as longer payment cycles, difficulty collecting trade accounts receivable and the impact of local and regional financial conditions on demand and payment for our tests;
- exposure to foreign currency exchange rate fluctuations, conversions of currencies, and the risk of repatriation of certain foreign currencies;
- natural disasters, political and economic instability, including wars (e.g. the war in Ukraine), terrorism and political unrest, outbreak of disease, boycotts, and other business restrictions; and
- regulatory and compliance risks related to applicable anti-bribery laws, including requirements to maintain accurate information and control over activities that may fall within the purview of these laws.

Any of these factors could significantly harm our existing relationships with international customers or derail our international expansion plans, which would cause our revenue and results of operations to suffer.

In addition, we are exposed to a number of additional risks and challenges related to our joint venture in China. These risks include, among others, difficulties predicting the market for genetic testing in Asia; competitive factors in this market, including challenges securing market share; local differences in customer demands and preferences and regulatory requirements; and many of the other risks of doing business internationally that are discussed above. Although we believe this joint venture could result in expanded long-term opportunities to address the genetic testing market in Asia, this belief could turn out to be wrong, and we may never realize these or any other benefits we anticipate from our joint venture. Moreover, any joint venture we may seek to establish may never produce sufficient revenue for us to recover our capital and other investments in the joint venture, and we could become subject to liabilities based on our involvement in the joint venture’s operations. The materialization of any of these risks could materially harm our performance and prospects.

**If we are sued for product or professional liability, we could face substantial liabilities that exceed our resources.**

Our business depends on our ability to provide reliable and accurate test results, including tests that incorporate rapidly evolving information about the role of genes and gene variants in disease and clinically relevant outcomes associated with these variants.

Hundreds of genes can be implicated in some disorders. Overlapping networks of genes and symptoms can be implicated in multiple conditions. As a result, and particularly with respect to pathology tests, substantial judgment is required in order to interpret the results of each test we perform and produce a report summarizing these results. Errors, such as failures to detect genomic variants with high accuracy, or mistakes, such as failures to completely and correctly identify the significance of gene variants or to detect disease, could subject us to product liability or professional liability claims. Any such claim against us could result in substantial damages and be costly and time-consuming to defend. Although we maintain liability insurance, including for errors and omissions, our insurance may not fully protect us from the financial impact of defending against these types of claims or any judgments, fines, or settlement costs arising out of any such claims. Additionally, any liability claim brought against us, with or without merit, could increase our insurance rates or prevent us from securing adequate insurance coverage in the future. Moreover, any liability lawsuit could damage our reputation or force us to suspend sales of our tests. The occurrence of any of these events could have a material adverse effect on our business, reputation and results of operations.

Fulgent Pharma's business may involve the testing of new drugs on patients in clinical trials in the future and, if marketing approval is granted, the availability of these drugs to be prescribed to patients. Our involvement in the clinical trials and development process creates a risk of liability for personal injury to or death of patients, particularly those with life-threatening illnesses, resulting from adverse reactions to the drugs administered during testing or after product launch, respectively. Although we maintain the types and amounts of insurance we view as customary and appropriate in the industries and countries in which we operate, if we are required to pay significant damages or incur significant defense costs in connection with any personal injury claim that is outside the scope of indemnification agreements we have with our clients, if any indemnification agreement is not performed in accordance with its terms or if our liability exceeds the amount of any applicable indemnification limits or available insurance coverage, our financial condition, results of operations and reputation could be materially and adversely affected.

In addition, insurance coverage is increasingly expensive and difficult to obtain. Inability to obtain or maintain sufficient insurance coverage at an acceptable cost or to otherwise protect against potential product or other legal or administrative liability claims could prevent or inhibit customer relationships, the clinical development, commercial production, and sale of any of our products and product candidates, which could adversely affect our business.

**Any inability to obtain additional capital when needed and on acceptable terms may limit our ability to execute our business plans, and our liquidity needs could be materially affected by market fluctuations and general economic conditions.**

We expect our capital expenditures and operating expenses to increase over the next several years as we seek to expand our infrastructure, other commercial operations, and research and development activities. As of December 31, 2022, we had cash, cash equivalents, and marketable securities of approximately $852.9 million. We maintain our cash, cash equivalents, and marketable securities with high quality, accredited financial institutions. However, some of these accounts exceed federally insured limits, and, while we believe the Company is not exposed to significant credit risk due to the financial strength of these depository institutions or investments, the failure or collapse of one or more of these depository institutions or default on these investments could materially adversely affect our ability to recover these assets and/or materially harm our financial condition. We may seek to fund future cash needs through securities offerings, credit facilities, or other debt financings, asset sales, collaborations or licensing arrangements. Additional funding may not be available to us when needed, on acceptable terms or at all. For example, the COVID-19 pandemic initially caused extreme disruption and volatility in the global capital markets and some investment banks and economists are predicting a recession in 2023. These circumstances and high volatility in capital markets generally may reduce our ability to access capital and/or adversely affect the stability of the depository institutions maintaining our assets.

If we raise additional funds by issuing equity securities, our existing stockholders could experience substantial dilution. Additionally, any preferred stock we issue could provide for rights, preferences, or privileges senior to those of our common stock, and our issuance of any additional equity securities, or the possibility of such an issuance, could cause the market price of our common stock to decline. The terms of any debt securities we issue or borrowings we incur, if available, could impose significant restrictions on our operations, such as limitations on our ability to incur additional debt or issue additional equity or other restrictions that could adversely affect our ability to conduct our business, and would result in increased fixed payment obligations. If we seek to sell assets or enter into collaborations or licensing arrangements to raise capital, we may be required to accept unfavorable terms or relinquish or license to a third party our rights to important or valuable technologies or tests we may otherwise seek to develop ourselves. Moreover, we may incur substantial costs in pursuing future capital, including investment banking, legal, and accounting fees, printing and distribution expenses and other similar costs. If we are unable to secure funding if and when needed and on reasonable terms, we may be forced to delay, reduce the scope of or eliminate one or more sales and marketing initiatives, research and development programs or other growth plans or strategies. In addition, we may be forced to work with a partner on one or more aspects of our tests or market development programs or initiatives, which could lower the economic value to us of these tests, programs or initiatives. Any such outcome could significantly harm our business, performance and prospects.

**Inflation may adversely affect us by materially increasing our costs.**

Recently, inflation has increased throughout the U.S. economy. Inflation can adversely affect us by materially increasing the costs of clinical trials and research, the development of our tests and product candidates, administration and other costs of doing business. We may experience material increases in the prices of labor and other costs of doing business. In an inflationary environment, cost increases may materially outpace our expectations, causing us to use our cash and other liquid assets faster than forecasted. If this happens, we may need to raise additional capital to fund our operations, which may not be available in sufficient amounts or on reasonable terms, if at all, sooner than expected.

**If we are unable to maintain effective internal control over financial reporting, investors could lose confidence in the accuracy and completeness of our reported financial information, and the market price of our common stock could decline.**

We are required to maintain internal control over financial reporting and report any material weaknesses in these internal controls. Section 404 of the Sarbanes-Oxley Act requires that we evaluate and determine the effectiveness of our internal control over financial reporting and annually provide a management report on these internal controls. Although we have implemented systems, processes and controls and performed this evaluation as of the end of 2022, we will need to maintain and enhance these controls if and as we grow. Moreover, we may need to hire additional personnel and devote more resources to our financial reporting function in order to do so.

If one or more material weaknesses is identified during the process of evaluating our internal controls or if we do not detect errors on a timely basis, our financial statements may be materially misstated. In addition, in that event, our management would be unable to conclude that our internal control over financial reporting is effective. In addition, now that we are no longer an emerging growth company, we are required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. Any failure to develop or maintain effective controls, or any difficulties encountered in their implementation or improvement, could materially harm our results of operations, cause us to fail to meet our reporting obligations, result in a restatement of our financial statements for prior periods, or adversely affect the results of management evaluations and independent registered public accounting firm audits of our internal control over financial reporting that we are required to include in our periodic reports that will be filed with the SEC. If we or our auditors were to conclude that our internal control over financial reporting was not effective because one or more material weaknesses had been identified or if internal control deficiencies result in the restatement of our financial results, investors could lose confidence in the accuracy and completeness of our financial disclosures and the price of our common stock could decline.

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

We are subject to the periodic reporting and other requirements of the Exchange Act. We have implemented disclosure controls and procedures designed to provide reasonable assurance that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. However, 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 errors or mistakes. 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. As a result, because of these inherent limitations in our control system, misstatements or omissions due to error or fraud may occur and may not be detected, which could result in failures to file required reports in a timely manner and filing reports containing incorrect information. Any of these outcomes could result in SEC enforcement actions, monetary fines or other penalties, damage to our reputation and harm to our financial condition and stock price.

**Our investments in marketable securities are subject to certain risks which could affect our overall financial condition, results of operations, or cash flows.**

We invest a portion of our available cash and cash equivalents by purchasing marketable securities in a managed portfolio and direct investments in a variety of debt securities, including corporate debt securities, municipal bonds, U.S. government and agency debt securities, and debt instruments issued by foreign governments. The primary objective of our investment activity is to maintain the safety of principal, preserve capital and provide for future liquidity requirements while maximizing yields without significantly increasing risk. Should any of our investments or marketable securities lose value or have their liquidity impaired, it could materially affect our overall financial condition. Additionally, should we choose or are required to sell these securities in the future at a loss, our consolidated operating results or cash flows may be materially and adversely affected.

**We have been the subject of a shareholder class action, which was recently dismissed without prejudice; and may be subject to further shareholder litigation in the future; our costs of defending such litigation, arbitration and other proceedings and any adverse outcome of such litigation, arbitration, or other proceeding may have a material adverse effect on our business and the results of our operations.**

We have been, and may from time to time in the future be, involved in and subject to material litigation and other legal proceedings. These proceedings may not always resolve in our favor and may materially and adversely affect our business. While the recent shareholder class action was dismissed, it was dismissed without prejudice, so there is no assurance that another complaint may not be filed in the future. Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity and reputational harm, among other factors.

## Reimbursement Risks

**Our ability to achieve or sustain profitability also depends on our collection of payment for the tests we deliver, which we may not be able to do successfully.**

We have historically focused primarily on providing our tests to hospitals, medical institutions and other laboratories, our traditional genetic testing customer base. Our customer base for our COVID-19 tests is principally comprised of governmental bodies, municipalities, and large corporations who pay us directly or through third-party payors. In March 2020, the Coronavirus Aid, Relief, and Economic Security Act, or CARES Act, was enacted, providing for reimbursement to healthcare providers for COVID-19 tests provided to uninsured individuals through a program administered by HRSA. However, HRSA announced that the program ceased accepting COVID-19 testing claims as of March 22, 2022, due to a lack of sufficient funds. While we believe we are entitled to all claims submitted to HRSA, we may be unable to fully collect payment for any unpaid claims submitted to HRSA prior to that time. Further, healthcare policy changes that influence the way healthcare is financed or other changes in the market that impact payment rates by institutional or non-institutional customers could also affect our collection rates. If we are unable to convince hospitals, medical institutions and other laboratories of the value and benefit provided by our tests and testing services, these customers may slow, or stop altogether, their purchases of our tests. Moreover, our ability to collect payment for our tests and testing services in a timely manner or at all from our healthcare provider customers may decline to the extent we expand our business into new healthcare provider customer groups, including individual physicians and other practitioners, from which collection rates are often significantly lower than hospitals, medical institutions and other laboratories and which involve substantial additional risks that are discussed in these risk factors below. Our collection risks also include the potential for default or bankruptcy by the party responsible for payment and other risks associated with payment collection generally. Any inability to maintain our past payment collection levels could cause our revenue and ability to achieve profitability to decline and adversely affect our business, prospects and financial condition.

If third-party payors do not provide coverage and adequate reimbursement for our tests and testing services, our potential for growth and our ability to collect revenue for these tests and testing services could be limited and our results of operations may be materially and adversely affected.

Coverage and reimbursement by third-party payors, including managed care organizations, private health insurers and government healthcare programs, such as Medicare and Medicaid, for the types of tests we perform can be limited and uncertain. Our customers may not order our tests or testing services unless third-party payors cover and provide adequate reimbursement for a substantial portion of the price of the tests. If we are not able to obtain coverage and an acceptable level of reimbursement for our tests from third-party payors, the patient for whom the test is ordered typically will owe a greater co-insurance, deductible or co-payment amount or may be expected to pay the entire cost of the test out-of-pocket, which could dissuade practitioners from ordering our tests and, if ordered, could result in a delay in or decreased likelihood of collecting payment, whether from patients or from third-party payors. We believe our ability to increase the amount of tests and testing services we sell to our healthcare provider customers and any corresponding revenue depends in part on our ability to achieve and maintain broad coverage and reimbursement for our tests from third-party payors.

Coverage and reimbursement by a third-party payor depends on a number of factors, including a payor's determination that a test or testing service is appropriate, medically necessary and cost-effective. Each payor makes its own decision as to whether to establish a policy or enter into a contract to cover our tests and the amount it will reimburse for each test, and any determination by a payor regarding coverage and amount of reimbursement for our tests would likely be made on an indication-by-indication basis. Even if a test has been approved for reimbursement for any particular indication or in any particular jurisdiction, there is no guarantee this test will remain approved for reimbursement or that any similar or additional tests will be approved for reimbursement in the future. Moreover, there can be no assurance that any new tests we launch will be reimbursed at all or at rates comparable to the rates of any previously reimbursed tests. In addition, the coding procedure used by all third-party payors with respect to establishing payment rates for various procedures, including our tests, is complex, does not currently adapt well to the tests we perform and may not enable coverage and adequate reimbursement rates for our tests. If physicians fail to provide appropriate diagnosis codes for tests that they order, we may not be reimbursed for our tests. Additionally, if we are not able to obtain sufficient clinical information in support of our tests, third-party payors could designate our tests as experimental or investigational and decline to cover and reimburse our tests because of this designation. As a result of these factors, obtaining approvals from third-party payors to cover our tests and testing services and establishing adequate reimbursement levels is an unpredictable, challenging, time-consuming and costly process, and we may never be successful.

To date, we have contracted directly with national health insurance companies to become an in-network provider and enrolled as a supplier in the Medicare program and a provider in some state Medicaid programs, and we have also received payment for our tests from other third-party payors as an out-of-network provider. Although becoming an in-network provider or enrolling as a supplier or provider means that we have agreed with these payors to provide certain of our tests at negotiated or set fee schedule rates, it does not obligate any physicians or other practitioners to order our tests or guarantee that we will receive reimbursement for our tests from these or any other payors at adequate levels. As a result, these payor relationships, any other similar relationships we may establish in the future, or any additional payments we may receive from other payors as an out-of-network provider, may not amount to acceptable levels of reimbursement for our tests or meaningful or any increases in our customer base or the number of tests we sell. We expect to focus on increasing coverage and reimbursement for our current tests and any future tests we may develop, but we cannot predict whether, under what circumstances, or at what payment levels payors will cover and reimburse us for our tests. Further, even if we are successful, we believe it could take several years to achieve coverage and adequate contracted reimbursement with third-party payors. If we fail to establish and maintain broad coverage and reimbursement for our tests, our ability to maintain or grow our test volume, customer base, collectability rates and revenue levels could be limited and our future prospects and our business could suffer.

**Failure to comply with government laws and regulations related to submission of claims for our services could result in significant monetary damages and penalties and exclusion from the Medicare and Medicaid programs and corresponding foreign reimbursement programs.**

We are subject to laws and regulations governing the submission of claims for payment for our services, such as those relating to: coverage of our tests and testing services under Medicare, Medicaid and other state, federal and foreign health care programs; the amounts that we may bill for our services; and the party to which we must submit claims. Our failure to comply with applicable laws and regulations could result in our inability to receive payment for our services or in attempts by state and federal health care programs, such as Medicare and Medicaid, to recover payments already made. Submission of claims in violation of these laws and regulations can result in recoupment of payments already received, substantial civil monetary penalties, and exclusion from state and federal health care programs, and can subject us to liability under the federal False Claims Act and similar laws. The failure to report and return an overpayment to the Medicare or Medicaid program within 60 days of identifying its existence can give rise to liability under the False Claims Act. Further, a government agency could attempt to hold us liable for causing the improper submission of claims by another entity for services that we performed if we were found to have knowingly participated in the arrangement at issue.

**Billing and collections processing for our tests is complex and time-consuming, and any delay in transmitting and collecting claims could have an adverse effect on our revenue.**

Billing for our tests is complex, time-consuming and expensive. Depending on the billing arrangement and applicable law, we may bill various different parties for our tests. This includes billing customers directly, as in the case of our hospital and other medical institution customers, as well as billing through Medicare, Medicaid, insurance companies and patients, all of which may have different billing requirements. We may face increased risk in our collection efforts due to the complexities of these billing requirements, including long collection cycles and lower collection rates, which could adversely affect our business, results of operations and financial condition.

Several factors make this billing process complex, including:

- contractual restrictions in our customer contracts that may limit our ability to utilize certain third-party billing service providers;
- differences between the list price for our tests and the reimbursement rates of payors;
- compliance with complex federal and state regulations related to billing government healthcare programs, including Medicare and Medicaid;
- disputes among payors as to which party is responsible for payment;
- differences in coverage among payors and the effect of patient co-payments or co-insurance;
- differences in information and billing requirements among payors;
- incorrect or missing billing information; and
- the resources required to manage the billing and claims appeals process.

We have developed internal systems and procedures to handle these billing and collections functions, but we will need to make significant efforts and expend substantial resources to further develop our systems and procedures to handle these aspects of our business, which could become increasingly important as we focus on increasing test volumes from non-hospital and medical institution customer groups and establishing coverage and reimbursement policies with third-party payors. As a result, these billing

complexities, along with the related uncertainty in obtaining payment for our tests, could negatively affect our revenue and cash flow, our ability to achieve or sustain profitability and the consistency and comparability of our results of operations. In addition, if claims for our tests are not submitted to payors on a timely basis, or if we are required to switch to a different provider to handle our processing and collections functions, our revenue and our business could be adversely affected.

## Regulatory Risks

**Any changes in laws, regulations, or the enforcement discretion of the FDA with respect to the marketing of diagnostic products, or violations of laws or regulations by us, could materially and adversely affect our business, prospects, results of operations or financial condition.**

The laws and regulations governing the marketing of diagnostic products are evolving, extremely complex and in many instances, have no significant regulatory or judicial interpretations of these laws and regulations. Pursuant to its authority under the federal FDC Act, the FDA has jurisdiction over medical devices, including IVDs, and, therefore, potentially our clinical laboratory tests. Among other things, pursuant to the FDC Act and its implementing regulations, the FDA regulates the research, 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 products distributed domestically are safe and effective for their intended uses. In addition, the FDA regulates the import and export of medical devices.

Although the FDA has statutory authority to assure that medical devices and IVDs, including potentially our tests, are safe and effective for their intended uses, the FDA has historically exercised its enforcement discretion and not enforced applicable provisions of the FDC Act and regulations with respect to laboratory developed tests, or LDTs, which are a particular type of medical device. We believe our tests are LDTs. As a result, we believe our tests are not currently subject to the FDA's enforcement of its medical device regulations and the applicable FDC Act provisions.

Even though we commercialize our tests as LDTs, our tests may in the future become subject to more onerous regulation by the FDA. For example, the FDA may disagree with our assessment that our tests fall within the definition of an LDT and seek to regulate our tests as medical devices. Moreover, the FDA issued draft guidance and a 2017 Discussion Paper to allow for further public discussion about an appropriate LDT oversight approach and to give congressional committees the opportunity to develop a legislative solution. The FDA also solicited public input and published two final guidance documents in April 2018 relating to FDA oversight of NGS-based tests. These two guidance documents describe the FDA's thinking and recommendations regarding test developer's use of FDA-recognized standards to support analytical validity, and public human genetic variant databases to support clinical validity, of these tests.

Separately, members of Congress have been working with stakeholders for several years on a possible bill to reform the regulation of in vitro clinical tests including LDTs. Most recently the VALID Act has been garnering bipartisan and bicameral support. The VALID Act would codify into law the term "in vitro clinical test" to create a new medical product category separate from medical devices that includes products currently regulated as IVDs, as well as LDTs. The VALID Act would also create a new system for labs and hospitals to use to submit their tests electronically to the FDA for approval, which is aimed at reducing the amount of time it takes for the agency to approve such tests, and establish a new program to expedite the development of diagnostic tests that can be used to address a current unmet need for patients.

It is unclear whether the VALID Act would be passed by Congress in its current form or signed into law by President Biden. Until the FDA promulgates binding regulations through notice-and-comment rulemaking regarding LDTs, or the VALID Act or other legislation is passed reforming the federal government's regulation of LDTs, it is unknown how the FDA may regulate our tests in the future and what testing and data may be required to support any required clearance or approval.

If the FDA creates a new regulation to enforce its medical device requirements for LDTs, or if the FDA disagrees with our assessment that our tests are LDTs, we could, for the first time, be subject to enforcement of a variety of regulatory requirements, including registration and listing, medical device reporting and quality control, and we could be required to obtain premarket clearance or approval for our existing tests and any new tests we may develop, which may force us to cease marketing our tests until we obtain the required clearance or approval. The premarket review process can be lengthy, expensive, time-consuming and unpredictable. Further, obtaining premarket clearance may involve, among other things, successfully completing clinical trials. Clinical trials require significant time and cash resources and are subject to a high degree of risk, including risks of experiencing delays, failing to complete the trial or obtaining unexpected or negative results. If we are required to obtain premarket clearance or approval and/or conduct premarket clinical trials, our development costs could significantly increase, our introduction of any new tests we may develop may be delayed and sales of our existing tests could be interrupted or stopped. Any of these outcomes could reduce our revenue or increase our costs and materially adversely affect our business, prospects, results of operations or financial condition. Moreover, any cleared or approved labeling claims may not be consistent with our current claims or adequate to support continued adoption of and reimbursement for our tests. For instance, if we are required by the FDA to label our tests as investigational, or if labeling claims the

FDA allows us to make are limited, order levels may decline and reimbursement may be adversely affected. As a result, we could experience significantly increased development costs and a delay in generating additional revenue from our existing tests or from tests we may develop.

In addition, while we qualify all materials used in our products in accordance with the regulations and guidelines of CLIA, the FDA could promulgate regulations or guidance documents impacting our ability to purchase materials necessary for the performance of our tests. If any of the reagents we obtain from suppliers and use in our tests are affected by future regulatory actions, our business could be adversely affected, including by increasing the cost of testing or delaying, limiting or prohibiting the purchase of reagents necessary to perform testing with our products.

Failure to comply with any applicable FDA requirements could trigger a range of enforcement actions by the FDA, including warning letters, civil monetary penalties, injunctions, criminal prosecution, recall or seizure, operating restrictions, partial suspension or total shutdown of operations and denial of or challenges to applications for clearance or approval, as well as significant adverse publicity.

**If we fail to comply with applicable federal, state, local and foreign laboratory licensing requirements, we could lose the ability to perform our tests and experience material disruptions to our business.**

We are subject to CLIA, a federal law that establishes quality standards for all laboratory testing and is intended to ensure the accuracy, reliability and timeliness of patient results. CLIA requires that we hold a certificate specific to the categories of laboratory testing that we perform and that we comply with various standards with respect to personnel qualifications, facility administration, proficiency testing, quality control, quality assurance and inspections. CLIA certification is required in order for us to be eligible to bill federal and state health care programs, as well as many private third-party payors, for our tests. We have obtained CLIA certification to conduct our tests at our laboratories in Temple City and El Monte, California; Irving, Texas; Needham, Massachusetts; Phoenix, Arizona; Alpharetta, Georgia; and New York, New York.

In addition to CLIA requirements, we elect to have our laboratories accredited by CAP. CMS has deemed CAP standards to be equally or more stringent than CLIA regulations and has approved CAP as a recognized accrediting organization. Inspection by CAP is performed in lieu of inspection by CMS for CAP-accredited laboratories. Because we are accredited by CAP, we are deemed to also comply with CLIA. 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. 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 also required to maintain a license to conduct testing in the State of California. California laws establish standards for day-to-day operation of our clinical reference laboratory in Temple City and El Monte, including with respect to the training and skills required of personnel, quality control and proficiency testing requirements. In addition, because we receive test specimens originating from New York, we have obtained a state laboratory permit for our Temple City laboratory from the New York State Department of Health, or DOH. The New York state laboratory laws and regulations are equal to or more stringent than CLIA. In addition, the laboratory director must maintain a Certificate of Qualification issued by New York's DOH in permitted categories.

We are subject to on-site routine and complaint-driven inspections under both California and New York state laboratory laws and regulations. If we are found to be out of compliance with either California or New York requirements, the CA Department of Public Health or New York's DOH may suspend, restrict or revoke our license or laboratory permit, respectively (and, with respect to California, may exclude persons or entities from owning, operating or directing a laboratory for two years following such license revocation), assess civil monetary penalties, or impose specific corrective action plans, among other sanctions. Any such actions could materially and adversely affect our business by prohibiting or limiting our ability to offer testing.

Moreover, certain other states require us to maintain out-of-state laboratory licenses or obtain approval on a test-specific basis to perform testing on specimens from these states. Additional states could adopt similar licensure requirements in the future, which could require us to modify, delay or discontinue our operations in such jurisdictions. We are also subject to regulation in foreign jurisdictions, which we expect will increase as we seek to expand international utilization of our tests or if jurisdictions in which we pursue operations adopt new or modified licensure requirements. Foreign licensure requirements could require review and modification of our tests in order to offer them in certain jurisdictions or could impose other limitations, such as restrictions on the transport of human blood or other tissue necessary for us to perform our tests that may limit our ability to make our tests available outside the United States. Additionally, 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 could result in a range of enforcement actions, including license suspension, limitation or revocation, directed plan of correction, onsite monitoring, civil monetary penalties, civil injunctive suits, criminal sanctions and exclusion from the Medicare and Medicaid programs, 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 or any other required local, state or foreign license or accreditation, could have a material adverse effect on our business, financial condition and results of operations. In such case, even if we were able to bring our laboratory back into compliance, we could incur significant expenses and lose revenue while doing so.

**We are subject to broad legal requirements regarding the information we test and analyze, and any failure to comply with these requirements could result in materially significant, penalties, materially damage our reputation and materially harm our business.**

Our business is subject to federal and state laws that protect the privacy and security of personal information, including the HIPAA, HITECH, and similar state laws, as well as numerous other federal, state and foreign laws, including consumer protection laws and regulations, that govern the collection, dissemination, use, access to, confidentiality and security of patient health information. In addition, new laws and regulations that further protect the privacy and security of medical records or medical information are regularly considered by federal and state governments. Further, with the recent increase in publicity regarding data breaches resulting in improper dissemination of consumer information, federal and state governments have passed or are considering laws regulating the actions that a business must take if it experiences a data breach, such as prompt disclosure to affected customers. The FTC and states' Attorneys General have also brought enforcement actions and prosecuted some data breach cases as unfair and/or deceptive acts or practices under the FTC Act and comparable state laws. In addition to data breach notification laws, some states have enacted statutes and rules requiring businesses to reasonably protect certain types of personal information they hold or to otherwise comply with certain specified data security requirements for personal information. We intend to continue to comprehensively protect all personal information and to comply with all applicable laws regarding the protection of such information.

Any failure to implement appropriate security measures to protect the confidentiality and integrity of personal information or any breach or other failure of these systems resulting in the unauthorized access, manipulation, disclosure, or loss of this information could result in our noncompliance with these laws. Penalties for failure to comply with a requirement of HIPAA and HITECH vary significantly depending on the failure and could include civil monetary or criminal penalties.

The European Union formally adopted the GDPR, which applies to all European Union member states. The GDPR introduced stringent new data protection and operational requirements in the European Union for companies that receive or process personal data of European residents, as well as substantial fines for breaches of the data protection rules. It has increased our responsibility and liability in relation to personal data that we process and we are required to maintain additional mechanisms ensuring compliance with the GDPR. The GDPR is a complex law and the regulatory guidance is still evolving, including with respect to how the GDPR should be applied in the context of clinical studies and the collection, processing, and storage of sensitive personal data, including genetic information and testing. Furthermore, many of the countries within the European Union are still in the process of drafting supplementary data protection legislation in key fields where the GDPR allows for national variation, including the fields of clinical study and other health-related information. These variations in the law may raise our costs of compliance and result in greater legal risks. On July 16, 2020, the highest Court of Justice of the European Union or the CJEU, issued a landmark opinion in the case Maximilian Schrems vs. Facebook (Case C-311/18), or Schrems II. This decision calls into question certain data transfer mechanisms as between the European Union member states and the U.S. The CJEU is the highest court in Europe, and the Schrems II decision heightens the burden on data importers to assess U.S. national security laws on their business and future actions of European Union data protection authorities are difficult to predict at this early date. Consequently, there is some risk of any such data transfers from the European Union being halted by one or more European Union member states. Any contractual arrangements requiring the transfer of personal data from the European Union to us in the United States will require greater scrutiny and assessments as required under Schrems II and may have an adverse impact on cross-border transfers of personal data or increase costs of compliance.

In addition, many states, such as California (where one of our clinical laboratories is located), 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 patient health information and other personal information. 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. California's patient privacy laws, for example, provide for penalties of up to $250,000 and permit injured parties to sue for damages. In addition to the California Confidentiality of Medical Information Act, California also recently enacted the California Consumer Privacy Act of 2018, or CCPA, which became effective on January 1, 2020. The CCPA has been characterized as the first "GDPR-like" privacy statute to be enacted in the United States because it mirrors a number of the key provisions of the GDPR. The CCPA establishes a new privacy framework for covered businesses in the State of California by creating an expanded definition of personal information, establishing new data privacy rights for California residents, imposing special rules on the collection of personal data from minors, and creating a new and potentially severe statutory damages framework for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches. Additionally, the California Privacy Rights Act, or CPRA, took full effect on January 1, 2023. The CPRA amends and expands the CCPA significantly, potentially resulting in further uncertainty, additional costs and expenses in an effort to comply, and additional harm and liability for failure to comply. Among other things, the CPRA established the California Privacy Protection Agency, or

CPPA, a new regulatory authority charged with administering and enforcing the CRPA and privacy rights in California. The CPPA has the power to levy fines and bring other enforcement actions. The CPRA could impact our operations or that of our collaborators and business partners and impose new regulatory requirements and increase costs of compliance. Virginia, Connecticut, Utah, and Colorado enacted their own consumer privacy laws similar to CCPA and CPRA, all of which will take effect at various points in 2023. Other states are considering similar legislation, adding to the complexity, costs, and risk of compliance. Like the GDPR and CCPA, many of these state laws categorize medical or health data, genetic data, and biometric data that can be identify a natural person as "sensitive data" and the processing or collection of such will require additional compliance obligations.

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 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. Additionally, the interpretation, application and interplay of consumer and health-related data protection laws in the United States, Europe and elsewhere are often uncertain, contradictory and in flux. As a result, it is possible that laws may be interpreted and applied in a manner that is inconsistent with our current practices. Moreover, these laws and their interpretations are constantly evolving and may become more stringent or inclusive over time. For example, increasing concerns about health information privacy have recently prompted the federal government to issue guidance taking a newly expansive view of the scope of the laws and regulations that they enforce. Complying with these laws or any new laws or interpretations of their application could involve significant time and substantial costs or require us to change our business practices and compliance procedures in a manner potentially adverse to our business. We may not be able to obtain or maintain compliance with the diverse privacy and security requirements in all of the jurisdictions in which we currently or plan to do business, and failure to comply with any of these requirements could result in material civil or criminal penalties, materially harm our reputation and materially adversely affect our business.

Many states, such as California and Massachusetts, have also implemented genetic testing and privacy laws imposing specific patient consent requirements and requirements for protecting certain test results. As regulatory focus on genetic 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.

**Ethical, legal and social concerns related to the use of genetic information could reduce demand for our tests.**

Genetic testing has raised ethical, legal and social issues regarding privacy and the appropriate uses of the resulting information. Government authorities could, for social or other purposes, limit or regulate the use of genetic information or genetic testing or prohibit testing for genetic predisposition to certain conditions, particularly for those that have no known cure. Similarly, these concerns may cause patients to refuse to use, or physicians to be reluctant to order, genetic tests such as ours, even if permissible. These and other ethical, legal and social concerns may limit market acceptance and adoption of our tests or reduce the potential markets for our tests, any of which could have an adverse effect on our business, financial condition and results of operations. In addition, California has enacted the Genetic Information Privacy Act that imposes privacy requirements on direct-to-consumer genetic testing companies that could change the discussion among patients and physicians related to genetic testing as a whole, and potentially reduce consumer interest in such testing more broadly.

**We conduct business in a heavily regulated industry. Complying with the numerous statutes and regulations pertaining to our business is expensive and time-consuming, and any failure by us, our consultants or commercial partners to comply could result in substantial and material penalties.**

Our industry and our operations are heavily regulated by various federal, state, local and foreign laws and regulations, and the regulatory environment in which we operate could change significantly and adversely in the future. These laws and regulations currently include, among others:

- CLIA's and CAP's regulation of our laboratory activities;
- FDA laws and regulations, including but not limited to requirements for offering LDTs;
- federal and state laws and standards affecting reimbursement by government health care programs, including certain coding requirements to obtain reimbursement and certain changes to the payment mechanism for clinical laboratory services resulting from the Protecting Access to Medicare Act of 2014, or PAMA;
- HIPAA and HITECH, which establish comprehensive federal standards with respect to the privacy and security of PHI, and requirements for the use of certain standardized electronic transactions with respect to transmission of such information, as well as similar laws protecting other types of personal information;

- state laws governing the maintenance of personally identifiable information of state residents, including medical information, and which impose varying breach notification requirements, some of which allow private rights of action by individuals for violations and also impose penalties for such violations;
- the federal Anti-Kickback Statute, which generally prohibits knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, in return for or to induce a person to refer to an individual any good, facility, item or service that is reimbursable under a federal health care program;
- the federal Stark Law, which generally prohibits a physician from making a referral for certain designated health services covered by the Medicare program, including laboratory and pathology services, if the physician or an immediate family member has a financial relationship with the entity providing the designated health services;
- the federal False Claims Act, which imposes civil penalties, and provides for civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Civil Monetary Penalties Law, which generally prohibits, among other things, the offering or transfer of remuneration to a Medicare or Medicaid beneficiary if it is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of services reimbursable by Medicare or Medicaid;
- the Eliminating Kickbacks in Recovery Act of 2018, or EKRA, which imposes criminal penalties for knowing or willful payment or offer, or solicitation or receipt, of any remuneration, whether directly or indirectly, overtly or covertly, in cash or in kind, in exchange for the referral or inducement of laboratory testing (among other health care services) covered by health care benefit programs (including commercial insurers) unless a specific exception applies;
- the Affordable Care Act, or ACA, which, among other things, establishes a requirement for providers and suppliers to report and return any overpayments received from the Medicare and Medicaid programs;
- other federal and state fraud and abuse laws, such as anti-kickback laws, prohibitions on self-referral, fee-splitting restrictions, insurance fraud laws, anti-markup laws, prohibitions on the provision of tests at no or discounted cost to induce physician or patient adoption and false claims acts, some of which may extend to services reimbursable by any third-party payor, including private payors;
- the federal Physician Payments Sunshine Act and various state laws on reporting relationships with health care providers and customers, which could be determined to apply to our LDTs;
- the prohibition on reassignment of Medicare claims and other Medicare and Medicaid billing and coverage requirements;
- state laws that prohibit other specified healthcare practices, such as billing physicians for tests that they order, waiving coinsurance, copayments, deductibles and other amounts owed by patients, business corporations practicing medicine or employing or engaging physicians to practice medicine and billing a state Medicaid program at a price that is higher than what is charged to one or more other payors;
- the U.S. Foreign Corrupt Practices Act, or FCPA, and applicable foreign anti-bribery laws;
- federal, state and local regulations relating to the handling and disposal of regulated medical waste, hazardous waste and biohazardous waste and workplace safety for healthcare employees;
- laws and regulations relating to health and safety, labor and employment, public reporting, taxation and other areas applicable to businesses generally, all of which are subject to change, including, for example, the significant changes to the taxation of business entities were enacted in December 2017; and
- similar foreign laws and regulations that apply to us in the countries in which we operate or may operate in the future.

The genetic testing industry is currently under a high degree of government scrutiny. The Office of Inspector General for the Department of Health and Human Services and a variety of states' Attorneys General have issued fraud alerts regarding a variety of cancer genetic testing fraud schemes, and the Department of Justice has announced indictments and guilty pleas in such fraud schemes involving a variety of individuals and entities, including genetic testing and other laboratories, physicians who ordered genetic testing for a large volume of patients without treating them, and third parties who arranged for the genetic testing by approaching patients through telemarketing calls, booths at public events, health fairs, and door-to-door visits. These individuals then shared the proceeds received from Medicare, TRICARE, and other third-party payors, and these activities allegedly violated the federal Anti-Kickback Statute and other criminal laws. This increased regulatory scrutiny could decrease demand for our testing services or increase our costs of regulatory compliance, either of which could have a material adverse effect on our business.

Any future growth of our business, including, in particular, growth of our international business and continued reliance on consultants, commercial partners and other third parties, may increase the potential for violating these laws. In some cases, our risk of violating these or other laws and regulations is further increased because of the lack of their complete interpretation by applicable regulatory authorities or courts, and their provisions are thus open to a variety of interpretations. Our Picture Genetics line of at-home genetic test offerings are patient-initiated screening tests, which may receive greater scrutiny from regulatory authorities than our traditional testing services that are offered directly to health care providers.

We have adopted policies and procedures designed to comply with these laws and regulations and, in the ordinary course of our business, we conduct internal reviews of our compliance with these laws. Our compliance is also subject to review by applicable government agencies. It is not always possible to identify and deter misconduct by employees, distributors, consultants and commercial partners, and the 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 government investigations or other actions or lawsuits stemming from a failure to comply with applicable laws or regulations. 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, divert our management's attention from the operation of our business and materially harm our reputation. If our operations, including the conduct of our employees, consultants and commercial partners, are found to be in violation of any of these laws and regulations, we may be subject to applicable penalties associated with the violation, including administrative, civil and criminal penalties, damages, fines, individual imprisonment, exclusion from participation in federal healthcare programs, refunding of payments received by us and curtailment or cessation of our operations, which could materially harm our reputation, business, prospects or results of operations.

**We may be required to modify our business practices, pay fines, incur significant expenses or experience losses due to litigation or governmental investigations.**

From time to time and in the ordinary course of our business, we have been and again may be subject to litigation or governmental investigation on a variety of matters in the United States or foreign jurisdictions, including, without limitation, regulatory, intellectual property, product liability, antitrust, consumer, false claims, whistleblower, Qui Tam, privacy, anti-kickback, anti-bribery, environmental, commercial, securities and employment litigation and claims and other legal proceedings that may arise from the conduct of our business. Our activities relating to our products and services are subject to extensive regulation in the United States and foreign jurisdictions. Like many companies in our industry, we have in the ordinary course of business received inquiries, subpoenas, civil investigative demand, or CIDs, and other types of information requests from government authorities. As previously disclosed, we have received a CID issued by the U.S. Department of Justice pursuant to the False Claims Act related to its investigation of allegations of medically unnecessary laboratory testing, improper billing for laboratory testing, and remuneration received or provided in violation of the Anti-Kickback Statute and the Stark Law. This CID requests information and records relating to certain of our customers named in the CID, which represent a small portion of our revenues. As we also disclosed in prior filings, we are also aware that the SEC is conducting a non-public formal investigation, which appears to relate to the matters raised in the CID requests and our Exchange Act reports filed for 2018 through 2020. We are fully cooperating with both the SEC and the U.S. Department of Justice and are responding promptly to their requests. We do not presently expect these matters to have a material adverse impact on our business. However, we cannot predict when the investigations will be resolved, the outcome of the investigations, or the potential impact on our business, which may ultimately be greater than we expect. In addition, government investigations and litigation generally may divert the attention of our management team and resources from our core business. As such, the time and attention of our management team in responding to these matters may limit their time available to devote to our business, and we may also incur significant expenses or experience losses in relation to these matters. As a result of these matters, we may also be required to alter the conduct of our operations or be subject to other penalties. Any of these circumstances may adversely affect our business, prospects, reputation and results of operations.

**Healthcare policy changes, including recently enacted and proposed new legislation reforming the U.S. healthcare system, could cause significant harm to our business, operations and financial condition.**

The ACA made a number of substantial changes to the way healthcare is financed both by governmental and private payors. The ACA also introduced mechanisms to reduce the per capita rate of growth in Medicare spending if expenditures exceed certain targets. Any such reductions could affect reimbursement payments for our tests. The ACA also contains a number of other provisions, including provisions governing enrollment in federal and state healthcare programs, reimbursement matters and fraud and abuse, which we expect will impact our industry and our operations in ways that we cannot currently predict.

In April 2014, Congress passed PAMA, which included substantial changes to the way in which clinical laboratory services are be paid under Medicare Clinical Laboratory Fee Schedule. Under PAMA, certain clinical laboratories are required to periodically report to CMS private payor payment rates and volumes for their tests, and laboratories that fail to report the required payment information may be subject to substantial civil monetary penalties. Medicare reimbursement for clinical laboratory diagnostic tests is based on the weighted-median of the payments made by private payors for these tests, rendering private payor payment levels even more significant than in the past. As a result, future Medicare payments may fluctuate more often and become subject to the

willingness of private payors to recognize the value of diagnostic tests generally and any given test individually. The impact of this payment system on rates for our tests, including any current or future tests we may develop, is uncertain.

Further, the impact on our business of the expansion of the federal and state governments' role in the U.S. healthcare industry generally, including the social, governmental and other pressures to reduce healthcare costs while expanding individual benefits, is uncertain. Any future changes or initiatives could have a materially adverse effect on our business, financial condition, results of operations and cash flows.

**Changes in laws and regulations, or in their application, may adversely affect our business, financial condition and results of operations.**

The clinical laboratory testing industry is highly regulated, and failure to comply with applicable regulatory, supervisory, accreditation, registration or licensing requirements may adversely affect our business, financial condition and results of operations. In particular, the laws and regulations governing the marketing and research of clinical diagnostic testing are extremely complex and in many instances there are no clear regulatory or judicial interpretations of these laws and regulations, increasing the risk that we may be found to be in violation of these laws.

Furthermore, the genetic testing industry as a whole is a growing industry and regulatory agencies such as HHS or the FDA may apply heightened scrutiny to new developments in the field, or the U.S. Congress may do so. Since 2017, Congress has been working on legislation to create an LDT and IVD regulatory framework that would be separate and distinct from the existing medical device regulatory framework, and recent momentum appears to be building around a comprehensive bill called the VALID Act. The VALID Act would codify into law the term "in vitro clinical test" to create a new medical product category separate from medical devices, and bring all such products within the scope of the FDA's oversight. It is unclear whether the VALID Act would be passed by Congress in its current form or signed into law by President Biden.

In addition, there has been a recent trend of increased U.S. federal and state regulation, scrutiny and enforcement relating to payments made to referral sources, which are governed by laws and regulations including the Stark law, the federal Anti-Kickback Statute, the federal False Claims Act, as well as state equivalents of such laws. For example, EKRA was passed in October 2018 as part of the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act. EKRA imposes criminal penalties for knowing or willful payment or offer, or solicitation or receipt, of any remuneration, whether directly or indirectly, overtly or covertly, in cash or in kind, in exchange for the referral or inducement of laboratory testing (among other health care services) payable by a "health care benefit program" (which includes private insurance companies), unless a specific exception applies. We cannot assure you that our relationships with physicians, sales representatives, hospitals, customers, or any other party will not be subject to scrutiny or will survive regulatory challenge under such laws. If imposed for any reason, sanctions under the EKRA could have a negative effect on our business.

**If the hazardous materials we use in our operations cause contamination or injury, we could be liable for resulting damages.**

Our operations require the use of regulated medical waste, hazardous waste and biohazardous waste, including chemicals, biological agents and compounds and blood and other tissue specimens. We are subject on an ongoing basis to federal, state and local laws and regulations governing the use, storage, handling and disposal of these hazardous materials and other specified waste products. Although we typically use licensed or otherwise qualified outside vendors to dispose of this waste, applicable laws and regulations could hold us liable for damages and fines if our or others' business operations or other actions result in contamination to the environment or personal injury due to exposure to hazardous materials. We cannot eliminate the risk of contamination or injury, and any liability imposed on us for any resulting damages or injury could exceed our resources or any applicable insurance coverage. The cost to secure such insurance coverage and to comply with these laws and regulations could become more significant in the future and any failure to comply could result in substantial costs and other business and reputational consequences, any of which could negatively affect our operating results.

**If we were deemed to be an investment company under the Investment Company Act of 1940, as amended, applicable restrictions could make it impractical for us to continue our business as currently conducted and could have a material adverse effect on our business, financial condition and results of operations.**

Under the Investment Company Act of 1940, or 1940 Act, a company generally will be deemed to be an "investment company" for purposes of the 1940 Act if (1) it is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting or trading in securities or (2) it engages, or proposes to engage, in the business of investing, reinvesting, owning, holding or trading in securities and it owns or proposes to acquire investment securities having a value exceeding 40% of the value of its total assets (exclusive of U.S. government securities and cash items) on an unconsolidated basis. We do not believe that we are an "investment company," as such term is defined in either of those sections of the 1940 Act and we intend to conduct our operations so that we will not be deemed an investment company. However, if we were to be deemed an investment company,

restrictions imposed by the 1940 Act, including limitations on our capital structure and our ability to transact with affiliates, could make it impractical for us to continue our business as it is currently being conducted and could have a material adverse effect on our business, financial condition and results of operations.

**Our joint venture in China is subject to risks and uncertainties relating to the laws and regulations of China and the changes in relations between the United States and China.**

Under its current leadership, the government of China has been pursuing economic reform policies, including by encouraging foreign trade and investment. However, there is no assurance that the Chinese government will continue to pursue such policies, that such policies will be successfully implemented, that such policies will not be significantly altered, or that such policies will be beneficial to our partnerships or activities in China. China's system of laws can be unpredictable, especially with respect to foreign investment and foreign trade. The United States government has called for substantial changes to foreign trade policy with China and has raised, and has proposed to further raise in the future, tariffs on several Chinese goods. China has retaliated with increased tariffs on United States goods. Moreover, China's legislature has adopted a national security law to substantially change the way Hong Kong has been governed since the territory was handed over by the United Kingdom to China in 1997. This law increases the power of the central government in Beijing over Hong Kong, limits the civil liberties of residents of Hong Kong and could restrict the ability of businesses in Hong Kong to continue to conduct business or to continue to with business as previously conducted. The U.S. State Department has indicated that the United States no longer considers Hong Kong to have significant autonomy from China. The U.S. State Department has recently enacted sanctions related to China's governing of Hong Kong. Any further changes in United States trade policy could trigger retaliatory actions by affected countries, including China, resulting in trade wars. Any regulatory changes and changes in United States and China relations may have a material adverse effect on our partnerships or activities in China, which could materially harm our business and financial condition.

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

Our international operations are subject to various anti-bribery laws, including the FCPA and similar anti-bribery laws in the non-U.S. jurisdictions in which we operate. The FCPA prohibits companies and their intermediaries from offering, making, or authorizing improper payments to non-U.S. or foreign officials for the purpose of obtaining or retaining business or securing any other improper advantage. These laws are complex and far-reaching in nature, and we may be required in the future to alter one or more of our practices to be in compliance with these laws or any changes to these laws or their interpretation.

We currently engage in significant business outside the United States, and we plan to increase our international operations in the future. These operations could involve dealings with governments, foreign officials and state-owned entities, such as government hospitals, outside the United States. In addition, we may engage distributors, other commercial partners or third-party intermediaries, such as representatives or contractors, or establish joint ventures or other arrangements to manage or assist with promotion and sale of our tests abroad and obtaining necessary permits, licenses and other regulatory approvals. Any such third parties could be deemed to be our agents and we could be held responsible for any corrupt or other illegal activities of our employees or these third parties, even if we do not explicitly authorize or have actual knowledge of such activities. We have instituted policies, procedures, and internal controls reasonably designed to promote compliance with the FCPA and other anti-corruption laws and we exercise a high degree of vigilance in maintaining, implementing and enforcing these policies and controls. However, these policies and controls could be circumvented or ignored, and we cannot guarantee compliance with these laws and regulations. Any violations of these laws or allegations of such violations could disrupt our operations, involve significant management distraction, involve significant costs and expenses, including legal fees, and harm our reputation. Additionally, other U.S. companies in the medical device and pharmaceutical fields have faced substantial fines and criminal penalties in the recent past for violating the FCPA and we could also incur these types of penalties, including criminal and civil penalties, disgorgement, and other remedial measures, if we violate the FCPA or other applicable anti-bribery laws. Any of these outcomes could result in a material adverse effect on our business, prospects, financial condition, or results of operations.

**Our services present the potential for embezzlement, identity theft or other similar illegal behavior by our employees, consultants, service providers or commercial partners.**

Our operations involve the use and disclosure of personal and business information that could be used to impersonate third parties or otherwise gain access to their data or funds. If any of our employees, consultants, service providers or commercial partners takes, converts or misuses these funds or data, we could be liable for any resulting damages, which could harm our financial condition and damage our business reputation.

**We could be adversely affected by alleged violations of the FTC Act or other truth-in-advertising and consumer protection laws.**

Our advertising for laboratory services and tests is subject to federal truth-in-advertising laws enforced by the FTC, as well as comparable state consumer protection laws. Under the FTC Act, the FTC is empowered, among other things, to (a) prevent unfair methods of competition and unfair or deceptive acts or practices in or affecting commerce; (b) seek monetary redress and other relief for conduct injurious to consumers; and (c) gather and compile information and conduct investigations relating to the organization, business, practices, and management of entities engaged in commerce. The FTC has very broad enforcement authority, and failure to abide by the substantive requirements of the FTC Act and other consumer protection laws can result in administrative or judicial penalties, including civil penalties, injunctions affecting the manner in which we would be able to market services or products in the future, or criminal prosecution. In conjunction with the launch of our Picture Genetics line of at-home genetic test offerings that are initiated by consumers, we plan to increase our advertising activities that would be subject to these federal and state truth-in-advertising laws. Any actual or perceived non-compliance with those laws could lead to an investigation by the FTC or a comparable state agency, or could lead to allegations of misleading advertising by private plaintiffs. Any such action against us would disrupt our business operations, cause damage to our reputation and result in a material adverse effect on our business.

## Risks Related to the Development of Therapeutic Candidates

**Fulgent Pharma's therapeutic candidates are in early stages of development and may fail or suffer delays that materially and adversely affect their future commercial viability.**

Fulgent Pharma is early in its development efforts, with only one therapeutic candidate having entered clinical trials (FID-007). Generally, before obtaining marketing approval for the commercial distribution of therapeutic candidates, Fulgent Pharma must conduct preclinical tests and clinical trials to demonstrate sufficient safety and efficacy of its therapeutic candidates in patients. Failure can occur at any time during the development or clinical trial process and Fulgent Pharma's future clinical trial results may not be successful. As a result, we may not have, or we may deem it imprudent to use, additional financial resources to continue development of a therapeutic candidate if there are issues that could delay or prevent marketing approval of, or ability to commercialize, Fulgent Pharma's therapeutic candidates, including:

- negative or inconclusive results from clinical trials, or the clinical trials of others for similar therapeutic candidates, leading to a decision or requirement to conduct additional preclinical testing or clinical trials or abandon a program;
- therapeutic-related side effects experienced by participants in its clinical trials or by individuals using drugs or other therapeutic products similar to its therapeutic candidates;
- delays in submitting investigational new drug applications, or INDs, or comparable foreign clinical trial applications or delays or failure in obtaining the necessary approvals from regulators to commence a clinical trial, or a suspension or termination of a clinical trial once commenced;
- conditions imposed by the FDA or comparable foreign authorities regarding the scope or design of clinical trials;
- delays in enrolling research subjects or high drop-out rates of research subjects enrolled in clinical trials;
- delays or difficulties in its clinical trials due to quarantines or other restrictions resulting from the COVID-19 pandemic or other public health emergencies;
- unfavorable FDA or other regulatory agency inspection and review of a clinical trial site or the manufacturing location(s) for a therapeutic candidate;
- inadequate supply or quality of therapeutic candidate clinical material or other raw materials or supplies necessary for the conduct of our clinical trials;
- failure of third-party contractors or investigators to comply with regulatory requirements or otherwise meet their contractual obligations in a timely manner, or at all;
- delays and changes in regulatory requirements, policy and guidelines, including with respect to our technology in particular; or
- varying interpretations of data by the FDA and similar foreign regulatory agencies.

The therapeutic candidates Fulgent Pharma pursues or has pursued may not demonstrate the necessary safety or efficacy requirements for marketing approval. Further, a clinical trial may be suspended or terminated by the company, the institutional review boards, or IRBs, of the institutions in which such trials are being conducted, the Data Safety Monitoring Board, or DSMB, for such trial or by the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using an investigational drug, changes in governmental regulations, administrative actions or lack of

adequate funding to continue the clinical trial. Clinical holds may be placed prior to a clinical trial even beginning, in order to address potential safety and risk concerns of regulatory authorities, and partial or complete clinical holds can be imposed at any time during a trial. Furthermore, while Fulgent Pharma performs certain similar functions internally, we expect it to rely on contract research organizations, or CROs, and clinical trial sites to ensure proper and timely conduct of our clinical trials and while we expect it to enter into agreements governing those CROs' committed activities we and Fulgent Pharma have limited influence over their actual performance.

If there are delays in the completion of, or termination of, any clinical trial of therapeutic candidates, the commercial prospects of those therapeutic candidates may be harmed. In addition, any delays in completing clinical trials will increase costs, slow down product development and approval processes, and jeopardize the ability to commence product sales and generate revenue. Any of these occurrences may materially and adversely affect our or Fulgent Pharma's business, financial condition, results of operations and prospects. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of marketing approval of therapeutic candidates.

**Any therapeutic product candidate that Fulgent Pharma may attempt to develop, manufacture or market in the United States will be subject to extensive regulation by the FDA, including regulations relating to development, preclinical testing, performance of clinical trials, manufacturing and post-approval commercialization and will be subject to extensive regulations outside of the United States. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. The time required to obtain FDA approval, and any other required approvals for pharmaceutical products, including any accelerated approval, is unpredictable but typically requires years to several years and may never be obtained.**

Any product that Fulgent Pharma may wish to develop, manufacture or market in countries other than the United States will also be subject to numerous foreign regulatory requirements governing the conduct of clinical trials, manufacturing and marketing, pricing and third-party reimbursement among other things in such countries. The foreign marketing approval process includes all of the risks and uncertainties associated with FDA approval described above as well as risks attributable to the satisfaction of local regulations in such foreign jurisdictions.

Obtaining marketing approval for pharmaceutical products requires the submission of extensive preclinical and clinical data and supporting information to FDA and comparable regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy. Securing marketing approval also typically requires the submission of information about the product manufacturing process, and in many cases the inspection of manufacturing, processing, and packaging facilities by the regulatory authorities. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use, or there may be deficiencies in manufacturing compliance by Fulgent Pharma or by its contract manufacturing organizations that could result in the candidate not being approved. Moreover, neither we nor Fulgent Pharma have obtained marketing approval for any therapeutic candidate in any jurisdiction and it is possible that none of our existing therapeutic candidates or any therapeutic candidates we may seek to develop in the future will ever obtain marketing approval.

Therapeutic candidates could fail to receive, or could be delayed in receiving, marketing approval for many reasons, including any one or more of the following:

- the FDA, European Medicines Agency, or EMA, or comparable foreign regulatory authorities may disagree with the design or implementation of clinical trials;
- Fulgent Pharma may be unable to demonstrate to the satisfaction of the FDA, EMA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication(s) for use;
- the results of clinical trials may not meet the level of statistical significance required by the FDA, EMA or comparable foreign regulatory authorities for marketing approval;
- Fulgent Pharma may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA, EMA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of product candidates may not be sufficient to support the submission of an application to obtain marketing approval in the United States or elsewhere;
- upon review of clinical trial sites and data, the FDA or comparable foreign regulatory authorities may find record keeping or the record keeping of clinical trial sites to be inadequate or may identify other deficiencies related to the trials;

- the manufacturing processes or facilities of third-party manufacturers with which we or Fulgent Pharma contract for clinical and commercial supplies may fail to meet the requirements of the FDA, EMA or comparable foreign regulatory authorities; or
- the medical standard of care or the approval policies or regulations of the FDA, EMA or comparable foreign regulatory authorities may significantly change in a manner that renders our clinical data insufficient for approval.

It is possible that none of the therapeutic candidates we or Fulgent Pharma may develop will obtain the marketing approvals necessary for us or our collaborators to sell the products either in the United States or any other country. Furthermore, approval by the FDA of a therapeutic product does not assure approval by regulatory authorities outside the United States or vice versa. Even if approval for a therapeutic product is obtained, such approval may be subject to limitations on the indicated uses or appropriate patient population that could result in a significantly reduced potential market size for the product.

Fulgent Pharma expects to utilize the FDA's Section 505(b)(2) pathway for most of its product candidates, which are being developed using its nano-drug delivery platform technology. If that pathway is not available, the development of such product candidates will likely take significantly longer, cost significantly more and entail significantly greater complexity and risk than currently anticipated, and, in any case, may not be successful.

Fulgent Pharma intends to develop and seek approval for its product candidates developed using its nano-drug delivery platform technology, including FID-007 and other candidates it may develop, pursuant to the FDA's 505(b)(2) pathway. If the FDA determines that it may not use this regulatory pathway, then it would need to seek regulatory approval via a "full" or "stand-alone" new drug application, or NDA, under Section 505(b)(1) of the Federal Food, Drug, and Cosmetic Act, or FDCA. This would require Fulgent Pharma to conduct additional clinical trials, provide additional safety and efficacy data and other information, and meet additional standards for regulatory approval, including possibly nonclinical data. If this were to occur, the time and financial resources required to obtain FDA approval, as well as the development complexity and risk associated with these programs, would likely substantially increase, which could have a material adverse effect on our business and financial condition.

The Drug Price Competition and Patent Term Restoration Act of 1984, informally known as the Hatch-Waxman Act, added Section 505(b)(2) to the FDCA. Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies and information that were not conducted by or for the applicant and for which the applicant has not obtained a right of reference. Utilization of the Section 505(b)(2) NDA pathway could expedite the development program for Fulgent Pharma's lead product candidate, FID-007.

Notwithstanding the approval of an increasing number of products by the FDA under Section 505(b)(2) over the last few years, certain brand-name pharmaceutical companies and others have objected to the FDA's interpretation of Section 505(b)(2). If the FDA's interpretation of Section 505(b)(2) is successfully challenged, or Congress were to amend the statute to alter the currently available regulatory pathway, the FDA may change its 505(b)(2) policies and practices, which could delay or even prevent the FDA from approving any NDA Fulgent Pharma submits under Section 505(b)(2). In addition, the pharmaceutical industry is highly competitive, and Section 505(b)(2) NDAs are subject to special requirements designed to protect the patent rights of sponsors of previously approved drugs referenced in a Section 505(b)(2) NDA. Even if Fulgent Pharma is able to utilize the Section 505(b)(2) regulatory pathway for one or more of its candidates, there is no guarantee this would ultimately lead to faster product development or earlier approval.

Moreover, any delay resulting from Fulgent Pharma's inability to pursue the FDA's 505(b)(2) pathway could result in new competitive products reaching the market more quickly than its product candidates, which may have a material adverse impact on its competitive position and prospects. Even if Fulgent Pharma is allowed to pursue the FDA's 505(b)(2) pathway for one or more of its drug product candidates, we cannot assure you that such candidates will receive the requisite approvals for commercialization.

## Intellectual Property Risks

**We primarily rely on trade secret protection, non-disclosure agreements and invention assignment agreements to protect our proprietary information, which may not be effective.**

We currently rely on trade secret protection, non-disclosure agreements and invention assignment agreements with our employees, consultants and third-parties to protect our confidential and proprietary information. Although our competitors have utilized and are expected to continue to utilize technologies and methods similar to ours and have aggregated and are expected to continue to aggregate libraries of genetic information similar to ours, we believe our success will depend in part on our ability to develop proprietary methods and libraries and to defend any advantages afforded to us by these methods and libraries relative to our competitors. If we do not protect our intellectual property and other confidential information adequately, competitors may be able to use our proprietary technologies and information and thereby erode any competitive advantages our intellectual property and other confidential information provide us.

We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent these rights are effectively maintained as confidential. We expect to rely primarily on trade secret and contractual protections for our confidential and proprietary information and we have taken security measures we believe are appropriate to protect this information. These measures, however, may not provide adequate protection for our trade secrets, know-how or other confidential information. We seek to protect our proprietary information by, among other things, entering into confidentiality agreements with employees, consultants and other third parties. These confidentiality agreements may not sufficiently safeguard our trade secrets and other confidential information and may not provide adequate remedies in the event of unauthorized use or disclosure of this information. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret or other proprietary information could be difficult, expensive and time-consuming and the outcome could be unpredictable. In addition, trade secrets or other confidential information could otherwise become known or be independently developed by others in a manner that could prevent legal recourse by us. If any of our trade secrets or other confidential or proprietary information were disclosed or misappropriated or if any such information was independently developed by a competitor, our competitive position could be harmed and our business could suffer.

**Litigation or other proceedings or third-party claims of intellectual property infringement or misappropriation could require us to spend significant time and money and prevent us from selling our tests or developing therapeutic candidates.**

We believe our ability to succeed will depend in part on our avoidance of infringement of patents and other proprietary rights owned by third parties, including the intellectual property rights of competitors. There are numerous third-party-owned U.S. and foreign patents, pending patent applications and other intellectual property rights that cover technologies relevant to our testing and testing services. We may be unaware of patents or other intellectual property rights that a third-party might assert are infringed by our business, and there may be pending patent applications that, if issued, could be asserted against us. As a result, our existing or future operations may be alleged or found to infringe existing or future patents or other intellectual property rights of others. Moreover, as we continue to sell our existing tests and if we launch new tests and enter new markets, competitors may claim that our tests infringe or misappropriate their intellectual property rights as part of strategies designed to impede our existing operations or our entry into new markets.

If a patent infringement or misappropriation of intellectual property lawsuit was brought against us, we could be forced to discontinue or delay our development or sales of any tests or other activities that are the subject of the lawsuit while it is pending, even if it is not ultimately successful. In the event of a successful claim of infringement against us, we could be forced to pay substantial damages, including treble damages and attorneys' fees if we were found to have willfully infringed patents; obtain one or more licenses, which may not be available on commercially reasonable terms when needed or at all; pay royalties, which may be substantial; or redesign any infringing tests or other activities, which may be impossible or require substantial time and expense. In addition, third parties making claims against us for infringement or misappropriation of their patents or other intellectual property rights could seek and obtain injunctive or other equitable relief, which, if granted, could prohibit us from performing some or all of our tests. Further, defense against these claims, regardless of their merit or success, could cause us to incur substantial expenses, be a substantial diversion to our management and other employee resources and significantly harm our reputation. Any of these outcomes could delay our introduction of new tests, significantly increase our costs or prevent us from conducting certain of our essential activities, which could materially adversely affect our ability to operate and grow our business.

**We may be subject to claims challenging the inventorship of our patents and other intellectual property.**

We may be subject to claims that former employees, collaborators or other third parties have an interest in our owned patents, trade secrets, or other intellectual property as an inventor or co-inventor. For example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our products or product candidates and other proprietary technologies we may develop. Litigation may be necessary to defend against these and other claims challenging inventorship or our ownership of our owned patents, trade secrets or other intellectual property. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, intellectual property that is important to our products, product candidates and other proprietary technologies we may develop. Even if we are successful in defending against such claims, litigation could result in 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, results of operations and prospects.

**Developments in patent law could have a negative impact on our business.**

From time to time, the Supreme Court, other federal courts, the U.S. Congress or the U.S. Patent and Trademark Office, or USPTO, may change the standards of patentability, and any such changes could have a negative impact on our business.

Three cases involving diagnostic method claims and "gene patents" have been decided by the Supreme Court in recent years. In March 2012, the Supreme Court issued a decision in Mayo Collaborative v. Prometheus Laboratories, or Prometheus, a case involving patent claims directed to optimizing the amount of drug administered to a specific patient, holding that the applicable patents' claims

failed to incorporate sufficient inventive content above and beyond mere underlying natural correlations to allow the claimed processes to qualify as patent-eligible processes that apply natural laws. In June 2013, the Supreme Court decided Association for Molecular Pathology v. Myriad Genetics, or Myriad, a case challenging the validity of patent claims relating to the breast cancer susceptibility genes BRCA1 and BRCA2, holding that isolated genomic DNA that exists in nature, such as the DNA constituting the BRCA1 and BRCA2 genes, is not patentable subject matter, but that cDNA, which is an artificial construct created from RNA transcripts of genes, may be patent eligible. In June 2014, the Supreme Court decided Alice Corporation Pty. Ltd. v. CLS Bank International, or Alice, which affirmed the Prometheus and Myriad decisions and provided additional interpretation.

If we make efforts to seek patent protection for our product candidates, products, technologies and tests, these efforts may be negatively impacted by the Prometheus, Myriad and Alice decisions, rulings in other cases or guidance or procedures issued by the USPTO. However, we cannot fully predict the impact of the Prometheus, Myriad and Alice decisions on the ability of genetic testing, biopharmaceutical or other companies to obtain or enforce patents relating to DNA, genes or genomic-related discoveries in the future, as the contours of when claims reciting laws of nature, natural phenomena or abstract ideas may meet patent eligibility requirements are not clear and may take years to develop via interpretation at the USPTO and in the courts. There are many previously issued patents claiming nucleic acids and diagnostic methods based on natural correlations that issued before these recent Supreme Court decisions and, although many of these patents may be invalid under the standards set forth in these decisions, they are presumed valid and enforceable until they are successfully challenged and third parties holding these patents could allege that we infringe or request that we obtain a license under such patents. Whether based on patents issued before or after these Supreme Court decisions, we could be forced to defend against claims of patent infringement or obtain license rights, if available, under these patents. In particular, although the Supreme Court has held in Myriad that isolated genomic DNA is not patent-eligible subject matter, third parties could allege that our activities infringe other classes of gene-related patent claims. There are numerous risks associated with any patent infringement claim that may be brought against us, as discussed above under "—Litigation or other proceedings or third-party claims of intellectual property infringement or misappropriation could require us to spend significant time and money and prevent us from selling our tests or developing therapeutic candidates."

In addition, the Leahy-Smith America Invents Act, or America Invents Act, which was signed into law in 2011, includes a number of significant changes to U.S. patent law. These changes include a transition from a "first-to-invent" system to a "first-to-file" system, changes to the way issued patents are challenged and changes to the way patent applications are disputed during the examination process. These changes may favor larger and more established companies that have greater resources to devote to patent application filing and prosecution. The USPTO has developed new regulations and procedures to govern the full implementation of the America Invents Act, but the impact of the America Invents Act on the cost of prosecuting any patent applications we may file, our ability to obtain patents based on our discoveries if we pursue them and our ability to enforce or defend any patents that may issue remains uncertain.

These and other substantive changes to U.S. patent law could affect our susceptibility to patent infringement claims and our ability to obtain any patents we may pursue and, if obtained, to enforce or defend them, any of which could have a material adverse effect on our business.

**We may not be able to enforce our intellectual property rights outside the United States.**

The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the United States, and many companies have encountered significant challenges in establishing and enforcing their proprietary rights outside the United States. These challenges can be caused by the absence of rules and methods for the establishment and enforcement of intellectual property rights in certain jurisdictions. In addition, the legal systems of some countries, particularly developing countries, do not favor the enforcement of certain intellectual property protection, especially relating to healthcare. These aspects of many foreign legal systems could make it difficult for us to prevent or stop the misappropriation of our intellectual property rights in these jurisdictions. Moreover, changes in the law and legal decisions by courts in foreign countries could affect our ability to obtain adequate protection for our technologies and enforce our intellectual property rights. As a result, our efforts to protect and enforce our intellectual property rights outside the United States may prove inadequate, in which case our ability to remain competitive and grow our business and revenue could be materially harmed.

**Third parties may assert that our employees or consultants have wrongfully used or disclosed confidential information or misappropriated trade secrets.**

We employ individuals who were previously employed at universities and biometric solution, genetic testing, diagnostic or other healthcare companies, including our competitors or potential competitors. Further, we may become subject to ownership disputes in the future arising from, for example, conflicting obligations of consultants or others who are involved in developing our and other parties' technologies and intellectual property rights. Although we try to ensure that our employees and consultants do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees or consultants have inadvertently or otherwise used or disclosed intellectual property rights, including trade secrets or other proprietary

information, of a former employer or other third-party. Litigation may be necessary to defend against these claims, should they arise. If we fail in defending against any such claims, we could be subject to monetary damages and the loss of valuable intellectual property rights or personnel. Even if we are successful in defending against any such claims, litigation could result in substantial costs, distract management and other employees and damage our reputation.

**If we fail to comply with our obligations under license or technology agreements with third parties, we could lose license rights that are important to our business. If our third-party licensors fail to comply with the terms of our license arrangements, we may be forced to engage in litigation to protection our rights, which may not be successful.**

We license certain intellectual property, including technologies and patents, from third parties, that is important to our research and development efforts, and in the future we may enter into additional agreements that provide us with licenses to valuable intellectual property or technology. If we fail to comply with any of the obligations under our license agreements, we may be required to pay damages and the licensor may have the right to terminate the license. Termination by the licensor could cause us to lose valuable rights, prevent us from continuing related research and development activities or otherwise materially and negatively impact our business. If our licensors fail to abide by the terms of a license agreement, fail to enforce licensed intellectual property against infringing third parties, if the licensed intellectual property are found to be invalid or unenforceable, or if we are unable to enter into necessary license agreements on acceptable terms or at all, we may be forced to engage in litigation to enforce our rights. This litigation may not be successful and may consume substantial amounts of time and resources. These circumstances could have a material adverse effect on our business, development efforts, financial condition or results of operations.

## Common Stock Risks

**An active, liquid trading market for our common stock may not be sustained, which could make it difficult for stockholders to sell their shares of our common stock.**

An active trading market for our common stock may not be sustained. Further, Mr. Hsieh, our founder, Chief Executive Officer and Chairman of our board of directors, beneficially owns approximately 28% of our outstanding voting equity as of December 31, 2022. As a result, fewer shares are actively traded in the public market, which reduces the liquidity of our common stock. The lack of an active trading market could impair our stockholders' ability to sell their shares at the desired time or at a price considered reasonable. Further, an inactive trading market may impair our ability to raise capital by selling shares of our common stock in the future, and may impair our ability to enter into strategic relationships or acquire companies or technologies using shares of our common stock as consideration.

Our common stock is listed on the Nasdaq Global Market, or Nasdaq, under the symbol "FLGT." If we fail to satisfy the continued listing standards of Nasdaq, however, we could be de-listed, which would negatively impact the price and liquidity of our common stock.

**The price of our common stock may be volatile and you could lose all or part of your investment.**

The trading price of our common stock has experienced, and may continue to experience, wide fluctuations and significant volatility. This volatility may be exacerbated by the relatively small and illiquid market for our common stock. Other factors that may contribute to this volatility include, among others:

- actual or anticipated fluctuations in our operating results;
- competition from existing tests or new tests that may emerge, particularly if competitive factors in our industry, including prices for testing and testing services, become more acute;
- failures to meet or exceed financial estimates and projections of the investment community or guidance we have provided to the public;
- issuance of new or updated research or reports by securities analysts or changed recommendations for our common stock;
- announcements by us or our competitors of significant acquisitions, investments, strategic relationships, joint ventures, collaborations or capital commitments;
- the timing and amount of our investments in our business and the market's perception of these investments and their impact on our prospects;
- actual or anticipated changes in laws or regulations applicable to our business or our tests;
- additions or departures of key management or other personnel;
- changes in coverage and reimbursement by current or potential payors;
- inability to obtain additional funding as and when needed on reasonable terms;
- disputes or other developments with respect to our or others' intellectual property rights;

- product liability claims or other litigation;
- sales of our common stock by us or our stockholders;
- general economic, political, industry and market conditions, including factors not directly related to our operating performance or the operating performance of our competitors, such as increased uncertainty in the U.S. regulatory environment for healthcare, trade and tax-related matters;
- events that affect, or have the potential to affect, general economic conditions, including but not limited to political unrest, global trade wars, natural disasters, act of war, terrorism, or disease outbreaks;
- and the other risk factors discussed in this report.

In addition, the stock market in general, and the market for the stock of companies in the life sciences and technology industries in particular, has experienced extreme price and volume fluctuations in recent years that have, at times, been unrelated or disproportionate to the operating performance of specific companies. These broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. In addition, in the past, following periods of volatility in the overall market and the market price of a particular company's securities, securities class action litigation has often been instituted against such company. This type of litigation, if instituted against us, could result in substantial costs, a diversion of our management's attention and resources and could damage our reputation.

**Our principal stockholders and management own a significant percentage of our capital stock and are able to exert significant control over matters subject to stockholder approval.**

Our executive officers, directors, beneficial owners of 5% or more of our outstanding voting equity and their respective affiliates collectively beneficially own approximately 44% of our outstanding voting equity as of December 31, 2022, and of this, Mr. Hsieh, our founder, Chief Executive Officer and Chairman of our board of directors, by himself beneficially owns approximately 28% of our outstanding voting equity as of December 31, 2022. As a result, these stockholders have the ability to control matters submitted to our stockholders for approval, including elections of directors, amendments to our organizational documents or approval of any merger, sale of assets or other major corporate transaction. This concentration of ownership may prevent or discourage unsolicited acquisition proposals or offers to acquire our common stock that some of our stockholders feel are in their best interests, as the interests of these stockholders may not coincide with the interests of our other stockholders and they may act in a manner that advances their best interests and not necessarily those of all of our stockholders. Further, this concentration of ownership could adversely affect the prevailing market price for our common stock.

**Sales of a substantial number of shares of our common stock in the public market, or the perception that such sales could occur, could cause the price of our common stock to fall.**

Sales of a substantial number of shares of our common stock in the public market could occur at any time. Any such sales, or the perception in the market that sales are pending or could occur, could reduce the market price of our common stock. The vast majority of the outstanding shares of our common stock are freely tradable without restriction in the public market, subject to certain volume and manner of sale limitations applicable to shares held by our affiliates, as that term is defined in the Securities Act. In addition, subject to similar limitations and any other applicable legal and contractual limitations, all of the shares of our common stock subject to outstanding equity-based awards or reserved for issuance pursuant to such awards we may grant in the future are registered under the Securities Act or are otherwise eligible under applicable securities laws for free trading in the public market upon their issuance.

**Future issuances of our common stock or rights to purchase our common stock, including pursuant to our equity incentive plan, could result in additional dilution to the percentage ownership of our stockholders and could cause the price of our common stock to fall.**

To raise capital or for other strategic purposes, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. We also may issue common stock or grant other equity awards for compensatory purposes under our equity incentive plan. If we issue common stock, convertible securities or other equity securities, including equity awards under our equity incentive plan, our then-existing stockholders could be materially diluted by such issuances and, if we otherwise issue preferred stock, new investors could gain rights, preferences and privileges senior to the holders of our common stock, any of which could cause the price of our common stock to decline.

**We do not intend to pay dividends on our common stock, so any returns will be limited to the value of our common stock.**

We currently anticipate that we will retain any future earnings to finance the continued development, operation and expansion of our business. As a result, we do not anticipate declaring or paying any cash dividends or other distributions in the foreseeable future. Further, if we were to enter into a credit facility or issue debt securities or preferred stock in the future, we may become contractually

restricted from paying dividends. If we do not pay dividends, our common stock may be less valuable because stockholders must rely on sales of their common stock after price appreciation, which may never occur, to realize any gains on their investment.

**If securities or industry analysts do not publish research or reports about our business or if they issue an adverse or misleading opinion regarding our common stock, our stock price and trading volume could decline.**

The trading market for our common stock is influenced by the research and reports that industry or securities analysts publish about us or our business. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, we could lose visibility in the financial markets, which could cause the price and trading volume of our common stock to decline. Further, if any of these analysts issues an adverse or misleading opinion regarding us, our business model, our industry or our stock performance or if our operating results fail to meet analyst expectations, the price of our common stock could also decline.

**Provisions in our charter documents and Delaware law could discourage, delay or prevent a change in control of our company or changes in our management and depress the market price of our common stock.**

Our certificate of incorporation and bylaws contain provisions that could depress the market price of our common stock by acting to discourage, delay or prevent a change in control of our company or changes in our management that our stockholders may deem advantageous. These provisions, among other things:

- authorize our board of directors to issue, without further action by our stockholders, up to 1.0 million shares of undesignated or "blank check" preferred stock;
- prohibit stockholder action by written consent, thus requiring all stockholder actions to be taken at a duly noticed and held meeting of our stockholders;
- specify that special meetings of our stockholders can be called only by our board of directors, the Chairman of our board of directors or our President, thereby eliminating the ability of our stockholders to call special meetings;
- permit only our board of directors to establish the number of directors and fill vacancies on the board of directors, except as may be required by law;
- permit our board of directors to amend our bylaws, subject to the power of our stockholders to repeal any such amendment;
- do not permit cumulative voting by our stockholders on the election of directors; and
- establish advance notice requirements for stockholders to propose nominees for election as directors or matters to be acted upon at annual meetings of stockholders.

In addition, we are subject to Section 203 of the Delaware General Corporation Law, or DGCL, which imposes certain restrictions on mergers, business combinations and other transactions between us and holders of 15% or more of our common stock. Section 203 may have the effect of discouraging, delaying or preventing a change in control of our company.

**Holders of our common stock could be adversely affected if we issue preferred stock.**

Pursuant to our certificate of incorporation, our board of directors is authorized to issue up to 1.0 million shares of preferred stock without any action by our stockholders. Our board of directors also has the power, without stockholder approval, to set the terms of any series of preferred stock that may be issued, among others, including voting rights, dividend rights and preferences over our common stock with respect to dividends or in the event of a dissolution, liquidation or winding up. If we issue preferred stock in the future that has preferences over our common stock with respect to payment of dividends or upon a liquidation, dissolution or winding up, or if we issue preferred stock that is convertible into our common stock at greater than a one-to-one ratio, the voting and other rights of the holders of our common stock and the market price of our common stock could be adversely affected.

**Our certificate of incorporation designates the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a judicial forum they consider favorable for disputes with us or our directors, officers or other employees.**

Our certificate of incorporation and bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for:

- any derivative action brought on our behalf;
- any direct action brought by a stockholder against us or any of our directors, officers or other employees, alleging a breach of a fiduciary duty;

- any action brought by a stockholder against us or any of our directors, officers or other employees, alleging a violation of the DGCL, our certificate of incorporation or our bylaws; and
- any action brought by a stockholder against us or any of our directors, officers or other employees, asserting a claim against us governed by the internal affairs doctrine.

We refer to the forgoing limitations as the Exclusive Forum Provisions. The Exclusive Forum Provisions do not apply to (i) actions in which the Court of Chancery in the State of Delaware concludes that an indispensable party is not subject to the jurisdiction of the Delaware courts, and (ii) actions in which a federal court has assumed exclusive jurisdiction of a proceeding.

Accordingly, the Exclusive Forum Provisions do not apply to actions brought to enforce a duty or liability created by the Exchange Act or the rules and regulations thereunder, or Exchange Act Claims. Further, the clause in our certificate of incorporation excepting "actions in which a federal court has assumed exclusive jurisdiction of a proceeding" from the Exclusive Forum Provisions is not intended to mean that a federal court must take any actual or affirmative action to assume jurisdiction over an Exchange Act Claim, as Section 27 of the Exchange Act creates exclusive federal jurisdiction over all Exchange Act Claims, regardless of whether a federal court takes any action. The Exclusive Forum Provisions also do not apply to federal and state suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder, or Securities Act Claims. To the extent applicable or enforceable, the Exclusive Forum Provisions may limit a stockholder's ability to bring a claim in a judicial forum it finds favorable for disputes with us or our directors, officers or other employees, which may discourage these lawsuits. Alternatively, for Securities Act Claims, Exchange Act Claims or claims for which a court were to find these Exclusive Forum Provisions inapplicable or unenforceable for one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving these matters in other jurisdictions, which could adversely affect our business, financial condition or results of operations.

**Item 1B. Unresolved Staff Comments.**

Not applicable.

**Item 2. Properties.**

Our corporate headquarters and laboratory operations are located in Temple City, California, where we lease and occupy approximately 12,000 square feet of office and laboratory space under leases that will expire in January 2024. We use these facilities for laboratory testing and management activities and certain research and development, administrative and other functions.

We have CLIA-certified laboratories located in Irving, Texas; Alpharetta, Georgia; Phoenix, Arizona; Needham, Massachusetts; and New York, New York. In Irving, Texas, we lease and occupy approximately 172,000 square feet under a lease that will expire in May 2024. In Alpharetta, Georgia, we lease and occupy approximately 65,000 square feet under a lease that will expire in March 2028. In Phoenix, Arizona, we lease and occupy approximately 25,000 square feet under a lease that will expire in November 2025. In Needham, Massachusetts, we lease and occupy approximately 21,000 square feet under a lease that will expire in September 2027. In New York, New York, we lease and occupy approximately 400 square feet under a lease that will expire in September 2024. We use these facilities for laboratory testing and certain administrative and other functions.

We also own a real property located at 4399-4401 Santa Anita Avenue, El Monte, California, which consists of approximately 61,612 total square feet of building situated on 2.6 acres of land. We have built a CLIA-certified laboratory at this location. We believe our existing facilities are adequate for our current and expected near-term needs and additional space would be available on commercially reasonable terms if required.

**Item 3. Legal Proceedings.**

From time to time, we may be involved in legal proceedings arising in the ordinary course of our business.

On September 20, 2022, the Company and two of its executive officers were named as defendants in a putative class action complaint filed in the U.S. District Court for the Central District of California (Case No. 2:22-cv-06764) on behalf of individuals who purchased or otherwise acquired the Company's securities between March 22, 2019 and August 4, 2022. The Complaint asserted claims under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 based on allegations that the Company and certain of its executive officers made false and/or misleading statements and/or failed to disclose laboratory testing, billing for laboratory testing, and remuneration received or provided that purportedly violated the Anti-Kickback Statute and Stark Law, and purportedly are the subject of the CID discussed in Note 8*, Debt, Commitments and Contingencies*, of our condensed consolidated financial statements included in this report. The Complaint sought recovery of unspecified damages, interest, costs, attorneys' fees and other relief.

On November 30, 2022, the Court appointed Co-Lead Plaintiffs and Co-Lead Counsel. On February 21, 2023, Co-Lead Plaintiffs filed a Notice of Voluntary Dismissal of all claims against defendants, and without any payment by us or our insurers. The voluntary dismissal is without prejudice so there is no assurance that another complaint may not be filed in the future.

Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity and reputational harm, among other factors.

**Item 4. Mine Safety Disclosures.**

Not applicable.

## PART II

### Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

#### Market Information

On September 29, 2016, our common stock was listed for trading on Nasdaq under the symbol "FLGT." There was no public market for our common stock prior to September 29, 2016.

#### Holders of Common Stock

As of February 1, 2023, there were 12 holders of record of our common stock, plus an indeterminate number of additional stockholders whose shares of our common stock are held on their behalf by brokerage firms or other agents.

#### Dividend Policy

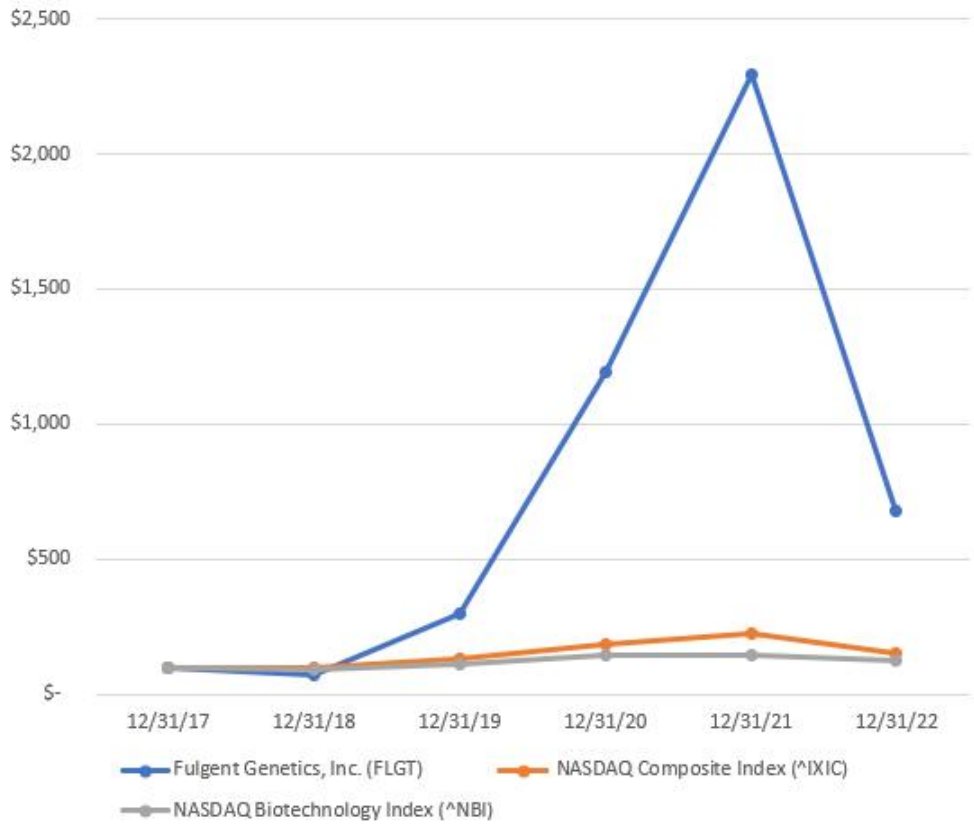
We currently anticipate that we will retain any future earnings to finance the continued development, operation and expansion of our business. As a result, we do not anticipate declaring or paying any cash dividends or other distributions in the foreseeable future. Any determination to pay dividends would be at the discretion of our board of directors and would depend on our results of operation, financial condition and other factors that our board of directors, in its discretion, considers relevant**.**

#### Use of Proceeds from Registered Securities

To date, we have used $85.9 million of the net proceeds from sales of our common stock, of which, $4.5 million was used for contributions to FF Gene Biotech prior to the FF Gene Biotech Acquisition and $81.4 million was used to fund the Company's operation and a business combination. All other net proceeds from sales of our common stock are invested in investment-grade and interest-bearing securities, such as corporate bonds, municipal bonds, and U.S. government and U.S. agency debt securities. There has been no material change in the planned use of proceeds from the sales of our common stock from that described in the Prospectus.

#### Common Stock Performance Graph

The following graph compares the cumulative total stockholder return, calculated on a dividend-reinvested basis, in Fulgent's Common Stock, the NASDAQ Composite Index, and the NASDAQ Biotechnology Index for the five years ended December 31, 2022. The comparison assumes that $100 was invested in the Company's Common Stock, the NASDAQ Composite Index, and the NASDAQ Biotechnology Index as of the market close on December 31, 2017. Note that historic stock price performance is not necessarily indicative of future stock price performance.




**Information on Share Repurchases**

The number of shares of common stock repurchased by the Company during the year ended December 31, 2022 and the average price paid per share are as follows:

| Period | (a) Total Number of Shares Purchased | (b) Average Price Paid Per Share (1) | (c) Total Number of Shares Purchased As Part of Publicly Announced Plans or Programs | (d) Maximum Dollar Value that May Yet Be Purchased Under the Plans or Programs |
|---|---|---|---|---|
| May 2022 (5/1/2022 - 5/31/2022) | 30,000 | $ 49.56 | 30,000 | $ 248,515,000 |
| June 2022 (6/1/2022 - 6/30/2022) | 185,000 | $ 48.97 | 185,000 | $ 239,429,000 |
| August 2022 (8/1/2022 - 8/31/2022) | 247,000 | $ 47.68 | 247,000 | $ 227,657,000 |
| September 2022 (9/1/2022 - 9/30/2022) | 533,000 | $ 43.04 | 533,000 | $ 204,752,000 |
| October 2022 (10/1/2022 - 10/31/2022) | 244,000 | $ 37.33 | 244,000 | $ 195,661,000 |
| November 2022 (11/1/2022 - 11/30/2022) | 234,000 | $ 35.83 | 234,000 | $ 187,276,000 |
| December 2022 (12/1/2022 - 12/31/2022) | 337,000 | $ 34.32 | 337,000 | $ 175,718,000 |
| Total | 1,810,000 | | 1,810,000 | |

(1) Includes commissions for the shares repurchased under the stock repurchase program.

**Item 6. [Reserved]**

**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.**

***Forward-Looking Statements***

*The following discussion and analysis of our financial condition and results of operations should be read together with our consolidated financial statements and related notes included in this report and contains forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act. We have omitted discussion of 2020 results where it would be redundant to the discussion previously included in Item 7 of our 2021 Annual Report on Form 10-K. Forward-looking statements are statements other than historical facts and relate to future events or circumstances or our future performance, and they are based on our current assumptions, expectations and beliefs concerning future developments and their potential effect on our business. The forward-looking statements in this discussion and analysis include statements about, among other things, our future financial and operating performance, our future cash flows and liquidity and our growth strategies, as well as anticipated trends in our business and industry. These forward-looking statements are subject to a number of risks and uncertainties, including, among others, those described under "Item 1A. Risk Factors" in Part I of this report. Moreover, we operate in a competitive and rapidly evolving industry and new risks emerge from time to time. It is not possible for us to predict all of the risks we may face, nor can we assess the impact of all factors on our business or the extent to which any factor or combination of factors could cause actual results to differ from our expectations. In light of these risks and uncertainties, the forward-looking events and circumstances described in this discussion and analysis may not occur, and actual results could differ materially and adversely from those described in or implied by any forward-looking statements we make. Although we have based our forward-looking statements on assumptions and expectations we believe are reasonable, we cannot guarantee future results, levels of activity, performance or achievements or other future events. As a result, forward-looking statements should not be relied on or viewed as predictions of future events, and this discussion and analysis should be read with the understanding that actual future results, levels of activity, performance and achievements may be materially different than our current expectations. The forward-looking statements in this discussion and analysis speak only as of the date of this report, and except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report to conform these statements to actual results or to changes in our expectations.*

**Overview**

We are a technology-based company with a well-established clinical diagnostic business and a therapeutic development business. Our clinical diagnostic business offers molecular diagnostic testing services, comprehensive genetic testing, and high-quality anatomic pathology laboratory services designed to provide physicians and patients with clinically actionable diagnostic information to improve the quality of patient care. Our therapeutic development business is focused on developing drug candidates for treating a broad range of cancers using a novel nanoencapsulation and targeted therapy platform designed to improve the therapeutic window and pharmacokinetic profile, or PK profile, of new and existing cancer drugs. We aim to transform from a genomic diagnostic business into a fully integrated precision medicine company.

We recorded revenue and income from operations of $619.0 million and $143.4 million, respectively, in 2022, compared to revenue and income from operations of $992.6 million and $507.4 million, respectively, in 2021.

**2022 Developments**

**Opening of New State-of-the-Art Oncology Laboratory in El Monte, California**

In May 2022, we opened a new state-of-the-art oncology laboratory in El Monte, California, near our global headquarters in Temple City. This new CLIA-certified lab enables us to expand our capabilities in somatic molecular diagnostics and cancer testing and more efficiently serve oncology clients on the West Coast of the United States.

**Acquisition of Inform Diagnostics**

In April 2022, we completed the acquisition of Inform Diagnostics, a leading national independent pathology laboratory based in Irving, Texas, and a portfolio company of Avista Capital Partners. Inform Diagnostics, formerly known as Pathology Partners, was founded in 1996 and has since become one of the largest national pathology laboratories in the United States, with offerings across gastrointestinal pathology, dermatopathology, urologic pathology, and hematopathology, among others. Inform Diagnostics currently provides services to approximately 1,300 clients who represent over 2,700 physicians. Inform Diagnostics is committed to providing physicians and the patients they serve with efficient, dependable, and high-quality service to facilitate faster treatment for patients and more efficient workflows for clinicians. The acquisition extends our capabilities into the pathology testing market, with the goal of continuing to innovate healthcare by developing new NGS based tests, among other technologies, to further serve the combined companies' large, nationwide customer base. With the addition of Inform Diagnostics' extensive testing capabilities, nationwide

salesforce, and significant managed care contracts, we believe we are better positioned to become a one-stop shop for diagnostic services throughout the healthcare continuum and across the United States. We see valuable cross-selling opportunities with Inform Diagnostics' national GI and GU specialist client base, including our newly launched liquid biopsy test for Hepatocellular carcinoma, HelioLiver, as well as an upcoming molecular test for urology, which is pending launch. In addition, we expect to offer high-value NGS-based oncology services to Inform Diagnostics' hematology clients. We believe Inform Diagnostics' client relationships will enable us to access more patients along key touchpoints to provide a comprehensive suite of diagnostic products and services leading to improved healthcare. The acquisition extends our in-network relationships with managed care organizations to over 300 million covered lives and expands our geographic footprint with the addition of CLIA, CAP, and NY State certified laboratories in California, New York, Arizona, Massachusetts, and Texas.

**Acquisition of Fulgent Pharma**

In November 2022, we completed the acquisition of Fulgent Pharma, a clinical-stage, therapeutics development company focused on the development of innovative cancer treatments. Through this acquisition and assuming successful development and the requisite approvals, we plan to offer a vertically integrated solution to combat cancer with the potential to create value for both this therapeutic and diagnostic our businesses. Fulgent Pharma and Fulgent Genetics were previously both owned by Fulgent Therapeutics until 2016, when the businesses were separated ahead of the Initial Public Offering of Fulgent Genetics. The companies have operated as separate entities since 2016, enabling each business to focus on and achieve core objectives across genetic testing and therapeutic drug development. Fulgent Pharma has developed a novel nanoencapsulation and targeted therapy platform, which is designed to improve the therapeutic window and pharmacokinetic profile of new and existing cancer drugs. Fulgent Pharma's lead candidate, FID-007, is currently being investigated in the United States in a Phase I clinical trial in patients diagnosed with various cancers including head and neck cancers, ampullary and pancreatic cancer. Top-line data from this trial is expected in the second quarter of 2023. Assuming positive data, we intend to seek regulatory approval in the United States using the 505(b)(2) pathway, which may shorten the clinical trial process and accelerate potential commercialization. We also plan to initiate Phase II clinical trials investigating the use of FID-007 in patients diagnosed with recurrent, or metastatic head and neck and other cancers in late 2023 and 2024, respectively.

## Factors Affecting Our Performance

**Genetic Testing Market and Industry Trends**

Genetic testing has experienced significant growth in recent years. If this growth trend continues, we believe genetic testing could become a more accepted part of standard medical care and the knowledge of a person's unique genetic makeup could begin to play a more important role in the practice of medicine. The advent of NGS technology, a relatively new genetic testing technique that enables millions of DNA fragments to be sequenced in parallel, has dramatically lowered the cost and improved the quality of genetic testing, contributing to increased adoption generally and increased volumes for our tests.

The growth of genetic testing in recent years has caused increased competition in our industry. This increased competition, as well as cost-saving initiatives on the part of government entities and other third-party payors, has resulted in downward pressure on the price for genetic analysis and interpretation, which could intensify in future periods if adoption of genetic testing becomes more widespread. We have reduced the prices for certain of our tests in recent periods to maintain our competitive position, and increased downward pricing pressure could harm our revenue and margins and our ability to achieve and sustain profitability. The impact of this pricing pressure has been and may continue to be intensified if we continue to incur increased expenses in order to meet customer demands and make investments in our business.

While adoption of genetic testing has increased in recent years, we believe widespread utilization has been tempered because of certain challenges and barriers to adoption that exist in today's market. Among these industry challenges are that genetic testing can be prohibitively expensive, only a limited number of genetic tests are currently reimbursable, certain genetic conditions cannot be diagnosed due to the limited scope of some genetic analysis, genetic testing can be an inefficient process and the interpretation of genetic results can be cumbersome and time-consuming. We have approached these competitive and operational industry challenges by building and continually advancing a multi-faceted technology platform that we believe will facilitate our ability to address many of these challenges.

**COVID-19 Testing Services**

We have experienced volume growth after the launch of our COVID-19 testing services in 2020. Most of the recent growth in our testing volume has resulted from COVID-19 tests that we conduct for certain counties, states and municipalities. The expansion of our COVID-19 testing business resulted in a substantial change in our business. However, due to decreased demand of testing, we experienced decreasing revenues from our COVID-19 testing services and we do not expect substantial revenue from COVID-19 testing in 2023.

**Mix of Tests Delivered**

We offer our tests at different price points, and we incur different amounts and types of costs, depending on the nature and level of complexity and customization of the test and the specific terms we have negotiated for the tests, which can vary from customer to customer. As a result, the mix of tests delivered in any period, and the customers that order these tests, impacts our financial results for the period.

**Mix of Customers**

We consider each single billing and paying unit to be an individual customer, even though a unit may represent multiple physicians and healthcare providers ordering tests. The composition and concentration of our customer base can fluctuate from period to period, and in certain prior periods, a small number of customers has accounted for a significant portion of our revenue. Generally, we do not have long-term purchase agreements with any of our customers, including these key customers, and, as result, any or all of them could decide at any time to increase, accelerate, decrease, delay or discontinue their orders from us. Although we believe some of these fluctuations in customer demand may be attributable in part to the nature of our business, in which our customers can experience significant volatility in their testing demand from period to period in the ordinary course of their operations, these demand fluctuations, particularly for our key customers, can have a significant impact on our period-to-period performance regardless of their cause.

We currently classify our customers into three payor types: (i) Insurance, including claim reimbursement from HRSA for uninsured individuals, (ii) Institutional, including hospitals, medical institutions, other laboratories, governmental bodies, municipalities and large corporations or (iii) Patients who pay directly. Typically, we bill our Institutional customers for our tests and they are responsible for paying us directly and billing their patients separately or obtaining reimbursement from third-party payors in connection with a patient's diagnosis related group. A small percentage of our customers are patients, who elect to pay for tests themselves with out-of-pocket payments after their physicians have ordered our tests.

We are making efforts to diversify our customer market, including building relationships with hospitals and affiliated specialties related to our service offerings. We are also pursuing relationships with payors, including Medicare, some state Medicaid programs and commercial payors, in an effort to obtain coverage and reimbursement for our tests to make them accessible to more individual physicians. Generally, when we establish these new customer relationships, we agree with the applicable payor, laboratory or other customer to provide certain of our tests at negotiated rates, but, subject to limited exceptions, most of these relationships do not obligate any party to order our tests at any agreed volume or frequency or at all. Further, any relationships we may develop with any government agencies are subject to unique risks associated with government contracts, including cancellation if adequate appropriations for subsequent performance periods are not made and modification or termination at the government's convenience without prior notice. These efforts may not lead to meaningful or any increases in our customer base and may not improve our ability to achieve or sustain profitability.

**Ability to Maintain Our Broad and Flexible Test Menu**

We believe the large number of genes we incorporate into our test menu provides a meaningful competitive advantage. We believe the breadth of genes in our portfolio allows us to provide more comprehensive genetic information and improves our variant detection rate, which can increase the clinical actionability of the data we produce. The breadth of genes in our portfolio also allows us to offer hundreds of pre-established, multi-gene panels that focus on specified genetic conditions, including our *Focus* and *Comprehensive* oncology panels and *Beacon* carrier screening panels and somatic cancer panels. In addition, all of our genetic panel tests can be adjusted up or down to include more or fewer genes, or customers can design their own panels to their exact specifications, resulting in a flexible and customizable test menu. We believe our ability to continue to offer more genes and more ordering flexibility than our competitors could be a key contributor to the long-term growth of our business.

**Ability to Maintain Low Internal Costs**

We have developed various proprietary technologies that improve our laboratory efficiency and reduce the costs we incur to perform our tests, including our proprietary gene probes, data algorithms, adaptive learning software and genetic reference library. This technology platform enables us to perform each test and deliver its results at a lower cost to us than many of our competitors, and this low cost allows us to maintain affordable and competitive pricing for our customers, which we believe encourages repeat ordering from existing customers and attracts new customers. We believe this low internal cost is a key factor in our ability to grow our business and obtain margins on our sales that allow us to drive toward sustained profitability.

Investments in our operational capabilities could increase our cost of revenue, but these investments could also, on a near-term and/or long-term basis, increase our operating efficiencies and lead to cost of revenue decreases. As a result, the amount, timing, nature and success of these investments, as well as other influences on our cost of revenue from period to period, can impact our costs.

Moreover, changes in our other operating expenses, due to investments in these aspects of our business or other factors, are not taken into account but impact our overall results, which can limit the utility of cost as an overall cost measurement tool.

**Ability to Obtain Reimbursement**

As part of our business plan for future growth, we intend to pursue coverage and reimbursement from third-party payors at a level adequate for us to achieve profitability. However, we cannot predict whether, under what circumstances, or at what payment levels payors will cover and reimburse for our tests, and even if we are successful, we believe it could take several years to achieve coverage and adequate contracted reimbursement with third-party payors. To date, we have contracted directly with national health insurance companies to become an in-network provider and enrolled as a supplier with the Medicare program and some state Medicaid programs, which means that we have agreed with these payors to provide certain of our tests at negotiated rates. Although this does not guarantee that we will receive reimbursement for our tests from these or any other payors at adequate levels, we believe our low cost could enhance our ability to compete effectively in the third-party payor market and our flexibility in establishing relationships with additional third-party payors in the future. Our level of success in obtaining and maintaining adequate coverage and reimbursement from third-party payors for our testing services will, we believe, be a key factor in the rate and level of growth of our business over the long term.

**Foreign Currency Exchange Rate Fluctuations**

Some of our business to date has been from non-U.S. customers, and we may record increasing revenue levels from non-U.S. sources as we focus on growing our international customer base. These revenue sources expose us to fluctuations in our results associated with changes in foreign currency exchange rates depending on the value of the U.S. dollar compared to the foreign currencies in which we record revenue. During all periods covered by this report, we consider the estimated effect on our revenue of foreign currency exchange rate fluctuations to be immaterial; however, the impact of foreign currency exchange rate fluctuations may increase in future periods as we pursue continued international expansion.

## Business Risks and Uncertainties

Our business and prospects are exposed to numerous risks and uncertainties. For more information, see “Item 1A. Risk Factors” in this report.

## Financial Overview

**Revenue**

We generate revenue from sales of our test and testing services. We recognize revenue upon delivery of a report to the ordering physician or other customer based on the established billing rate, less contractual and other adjustments, to arrive at the amount we expect to collect.

**Cost of Revenue**

Cost of revenue reflects the aggregate costs incurred in delivering test results, including “sequencing as a service,” and consists of: costs of laboratory supplies, including collection kits, personnel costs, including salaries, employee benefit costs, bonuses and equity-based compensation expenses; depreciation of laboratory equipment; amortization of leasehold improvements; and allocated overhead expenses, including rent and utilities. Costs associated with performing tests are recorded as tests are processed. We expect cost of revenue to generally increase as and if we increase the number of tests we deliver.

**Operating Expenses**

Our operating expenses are classified into five categories: research and development; selling and marketing; general and administrative; amortization of intangible assets; and restructuring costs. For each category except for amortization of intangible assets, the largest component is personnel costs, which include salaries, employee benefit costs, bonuses and equity-based compensation expenses.

***Research and Development Expenses***

Research and development expenses represent costs incurred to develop our technology and future tests and treatments. These costs consist of personnel costs, laboratory supplies, consulting costs and allocated overhead expenses, including rent and utilities. We expense all research and development costs in the periods in which they are incurred. We expect our research and development expenses will continue to increase in absolute dollars as we expect to continue to invest in research and development activities.

***Selling and Marketing Expenses***

Selling and marketing expenses consist of personnel costs, customer service expenses, direct marketing expenses, educational and promotional expenses, market research and analysis and allocated overhead expenses, including rent and utilities. We expense all selling and marketing costs as incurred. We expect our selling and marketing expenses will continue to increase in absolute dollars, primarily driven by our increased investment in sales and marketing in recent periods, including developing and expanding our sales team, creating and implementing new sales and marketing strategies and increasing the overall scope of our marketing efforts.

***General and Administrative Expenses***

General and administrative expenses include executive, finance, accounting, legal and human resources functions. These expenses consist of personnel costs, audit and legal expenses, consulting costs and allocated overhead expenses, including rent and utilities. We expense all general and administrative costs as incurred. We expect our general and administrative expenses will continue to increase in absolute dollars as we seek to continue to scale our operations. We also expect to continue to incur general and administrative expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the SEC, and the Nasdaq Stock Market, additional insurance expenses, investor relations activities and other administrative and professional services.

***Amortization of Intangible Assets***

Amortization of intangible assets consist of amortization expense on customer relationships, royalty-free technology, trade name, laboratory information system platform and in-place intangible assets that arose from the business combinations and a patent acquired. We amortize finite lived intangible assets over the period of estimated benefit using the straight-line method. Indefinite lived intangible assets are tested for impairment annually or whenever events or circumstances indicate that the carrying amount of the asset may not be recoverable. If impairment is indicated, we measure the amount of the impairment loss as the amount by which the carrying amount exceeds the fair value of the asset.

***Restructuring Costs***

Restructuring costs represent one-time employee termination benefits provided to employees associated with a newly acquired entity that were involuntarily terminated. A plan of termination was approved and authorized by management in the second quarter of 2022. The plan identified specific employees to be terminated and established terms of benefits those employees would receive upon termination. No additional costs are expected to be incurred under the plan of termination post 2022, and the payable balance is expected to be paid off by August 2023.

**Provision for Income Taxes**

Provision for income taxes consists of U.S. federal and state income taxes. A deferred tax liability is recognized for all taxable temporary differences, and a deferred tax asset is recognized for all deductible temporary differences, operating losses and tax credit carryforwards. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized.

The factors that most significantly impact our effective tax rate include the levels of net earnings and certain deductions, including those related to equity-based compensation, the effect of state income taxes, return to provision adjustments, and foreign tax rate differential. We expect that these factors could cause our consolidated effective tax rate to differ significantly from the U.S. federal income tax rate in future periods.

## Results of Operations

The table below summarizes the results of our continuing operations for each of the periods presented. Historical results are not indicative of the results to be expected in the current period or any future period.

| | Year Ended December 31, | | $ | % |
|---|---|---|---|---|
| | 2022 | 2021 | Change | Change |
| **Statement of Operations Data:** | (dollars in thousands) | | | |
| Revenue | $ 618,968 | $ 992,584 | $ (373,616) | (38)% |
| Cost of revenue | 252,067 | 215,533 | 36,534 | 17% |
| Gross profit | 366,901 | 777,051 | (410,150) | (53)% |
| Operating expenses: | | | | |
| Research and development | 28,910 | 24,219 | 4,691 | 19% |
| Selling and marketing | 38,918 | 24,439 | 14,479 | 59% |
| General and administrative | 111,074 | 50,732 | 60,342 | 119% |
| Amortization of intangible assets | 6,497 | 1,708 | 4,789 | 280% |
| Restructuring costs | 2,975 | — | 2,975 | * |
| Total operating expenses | 188,374 | 101,098 | 87,276 | 86% |
| Operating income | 178,527 | 675,953 | (497,426) | (74)% |
| Interest and other income, net | 5,498 | 1,347 | 4,151 | 308% |
| Income before income taxes and gain on equity-method investment | 184,025 | 677,300 | (493,275) | (73)% |
| Provision for income taxes | 42,102 | 174,795 | (132,693) | (76)% |
| Income before gain on equity-method investment | 141,923 | 502,505 | (360,582) | (72)% |
| Gain on equity-method investment | — | 3,734 | (3,734) | (100)% |
| Net income from consolidated operations | 141,923 | 506,239 | (364,316) | (72)% |
| Net loss attributable to noncontrolling interests | 1,480 | 1,125 | 355 | 32% |
| Net income attributable to Fulgent | $ 143,403 | $ 507,364 | $ (363,961) | (72)% |

* Percentage not meaningful.

**Revenue**

Revenue decreased $373.6 million, or 38%, from $992.6 million in 2021 to $619.0 million in 2022. The decrease in revenue between periods were primarily due to decreased orders for our COVID-19 tests.

Revenue from non-U.S. sources increased $2.2 million, or 16%, from $13.6 million in 2021 to $15.8 million in 2022. The increase in revenue from non-U.S. sources between periods were primarily due to increased sales of our traditional genetic testing services to customers in China through FF Gene Biotech which contributed $9.2 million in total revenue in 2022.

Aggregating customers that are under common control, one of our customers, County of Los Angeles, contributed 19% and 26% of our revenue in 2022 and 2021, respectively.

**Cost of Revenue**

Cost of revenue increased $36.5 million, or 17%, from $215.5 million in 2021 to $252.1 million in 2022. The increase was primarily due to increases of $45.1 million in personnel costs including equity-based compensation, $6.6 million in allocated overhead expenses including security expenses, and $3.8 million in shipping and handling expense primarily due to additions of Inform Diagnostics and CSI, and $13.0 million in depreciation expenses primarily due to additions in fixed assets for production, remaining useful lives of COVID-related equipment and addition of Inform Diagnostics, partially offset by decreases of $27.2 million in reagent and supply expenses, $5.0 million in external customer engagement platforms, and $2.3 million in consulting and outside labor expense related to the decreased tests delivered.

Our gross profit decreased $410.2 million, or 53%, from $777.1 million in 2021 to $366.9 million in 2022. The decrease in gross profit was primarily due to the decrease in revenue from our COVID-19 tests and increases in cost of revenue described above. Our gross profit as a percentage of revenue, or gross margin, decreased from 78.3% to 59.3% due to changes in product mix.

**Research and Development**

Research and development expenses increased $4.7 million, or 19%, from $24.2 million in 2021 to $28.9 million in 2022. The increase was primarily due to increases of $6.5 million in personnel costs including equity-based compensation expense related to increased headcount, $415,000 in depreciation expense, and $235,000 in allocated overhead expenses, partially offset by decreases of $1.5 million in reagent and supply expenses related to decreased reagent usage for research and $1.2 million in donations to COVID-19 research fund and colorectal cancer research made in 2021.

**Selling and Marketing**

Selling and marketing expenses increased $14.5 million, or 59%, from $24.4 million in 2021 to $38.9 million in 2022. The increase was primarily due to increases of $7.1 million in personnel costs including equity-based compensation expense related to increased headcount, $3.6 million in software expense from Inform Diagnostics, $1.0 million in travel expenses, $967,000 in commission expenses from CSI, $704,000 in consulting and outside labor related to marketing projects in 2022 and $632,000 in allocated overhead expenses due to addition of Inform Diagnostics.

**General and Administrative**

General and administrative expenses increased $60.3 million, or 119%, from $50.7 million in 2021 to $111.1 million in 2022. The increase was primarily due to increases of $23.7 million in increased provision for credit losses stemming from the cessation of funding for the HRSA program in March 2022, $14.0 million in personnel costs including equity-based compensation expense related to increased headcount, $6.2 million in acquisition-related costs, $4.9 million in legal and professional fees primarily related to general corporate matters, $3.2 million in allocated overhead expenses, $3.1 million in license and permit expense and $2.4 million in depreciation expense primarily from Inform Diagnostics, $2.2 million in insurance expense, and $1.5 million in accounting expenses related to financial statement and internal control audit and reviews, partially offset by a decrease of $790,000 in consulting and outside labor expense.

**Amortization of Intangible Assets**

Amortization of intangible assets represents amortization expenses on the intangible assets that arose from the business combinations in 2022 and 2021 and a patent purchased in 2021. The increase in amortization of intangible assets was primarily due to additions in intangible assets from business combinations in 2022.

**Restructuring Costs**

Restructuring expenses represent one-time employee termination benefits provided to employees that were involuntarily terminated in association with the acquisition of a new entity in 2022.

**Interest and Other Income, Net**

Interest and other income, net is primarily comprised of net interest income, which was $5.3 million and $1.3 million for 2022 and 2021, respectively. This interest income related to interest earned on various investments in marketable securities including realized and holding gain (loss) on marketable equity securities, net of interest expenses incurred on our notes payable and a margin loan.

**Provision for Income Taxes**

Provision for income taxes were $42.1 million and $174.8 million in 2022 and 2021, respectively. The effective income tax rate was 22.7% and 25.8% of income before income taxes for 2022 and 2021, respectively. The decrease in the effective tax rate for 2022 relative to 2021 was primarily attributable to international restructuring costs that were incurred in 2021 but not 2022.

See Note 11, *Income Taxes*, to our consolidated financial statements included in this report for more information regarding our income taxes.

**Gain on Equity-Method Investment**

Gain on equity-method investment in 2021 related to our preexisting equity interest at Fujian Fujun Gene Biotech Co., Ltd., or FF Gene Biotech as a result of remeasuring to fair value our 30% equity interest held before the acquisition of FF Gene Biotech, or the FF Gene Biotech Acquisition. The fair value of the preexisting equity interest was determined based on the characteristics before consummating the FF Gene Biotech Acquisition and estimated by applying income approach and utilizing the discounted cash flow method.

**Net Loss Attributable to Noncontrolling Interest**

Net loss attributable to noncontrolling interest represents net loss attributable to minority shareholders from entities not wholly owned.

## Liquidity and Capital Resources

### Liquidity and Sources of Cash

We had $852.9 million and $935.5 million in cash, cash equivalents and marketable securities as of December 31, 2022 and 2021, respectively. Our marketable securities primarily consist of equity securities and corporate bonds, municipal bonds, and U.S. government and U.S. agency debt securities, U.S. treasury bills, and Yankee debt securities as of December 31, 2022 and 2021.

Our primary uses of cash are to fund our operations and to fund strategic acquisitions as we continue to invest in and seek to grow our business. Cash used to fund operating expenses is impacted by the timing of our expense payments, as reflected in the changes in our outstanding accounts payable and accrued expenses.

We believe our existing cash, cash equivalent, and short-term marketable securities will be sufficient to meet our anticipated cash requirements for at least the next 12 months. Cash provided by operations has significantly contributed to our ability to meet our liquidity needs, including paying for capital expenditures, however, cash provided by our operations has in the past experienced fluctuations from period to period, which we expect may continue in the future. These fluctuations can occur because of a variety of factors, including, among others, factors relating to the demand for our tests, the amount and timing of sales, the prices we charge for our tests due to changes in product mix, customer mix, general price degradation for tests, or other factors, the rate and timing of our billing and collections cycles and the timing and amount of our commitments and other payments. Moreover, even if our liquidity expectations are correct, we may still seek to raise additional capital through securities offerings, credit facilities or other debt financings, asset sales or collaborations or licensing arrangements.

If we raise additional funds by issuing equity securities, our existing stockholders could experience substantial dilution. Additionally, any preferred stock we issue could provide for rights, preferences or privileges senior to those of our common stock, and our issuance of any additional equity securities, or the possibility of such an issuance, could cause the market price of our common stock to decline. The terms of any debt securities we issue or borrowings we incur, if available, could impose significant restrictions on our operations, such as limitations on our ability to incur additional debt or issue additional equity or other restrictions that could adversely affect our ability to conduct our business, and would result in increased fixed payment obligations. If we seek to sell assets or enter into collaborations or licensing arrangements to raise capital, we may be required to accept unfavorable terms or relinquish or license to a third party our rights to important or valuable technologies or tests we may otherwise seek to develop ourselves. Moreover, we may incur substantial costs in pursuing future capital, including investment banking, legal and accounting fees, printing and distribution expenses and other similar costs. Additional funding may not be available to us when needed, on acceptable terms or at all. If we are not able to secure funding if and when needed and on reasonable terms, we may be forced to delay, reduce the scope of or eliminate one or more sales and marketing initiatives, research and development programs or other growth plans or strategies. In addition, we may be forced to work with a partner on one or more aspects of our tests or market development programs or initiatives, which could lower the economic value to us of these tests, programs or initiatives. Any such outcome could significantly harm our business, performance and prospects.

### Cash Flows

The following table summarizes cash flows from continuing operations for each of the periods presented:

| | Year Ended December 31, | |
|---|---|---|
| | 2022 | 2021 |
| | (in thousands) | |
| Net cash provided by operating activities | $ 253,520 | $ 538,577 |
| Net cash used in investing activities | $ (261,314) | $ (546,548) |
| Net cash (used in) provided by financing activities | $ (77,141) | $ 85,405 |

*Operating Activities*

Cash provided by operating activities in 2022 was $253.5 million. The difference between net income and net cash provided by operating activities for the period was primarily due to the effect of $32.7 million in the depreciation and amortization, $32.6 million in equity-based compensation expenses, $32.6 million in provision for credit losses, $9.1 million in unrecognized tax benefits, $4.9 million in noncash lease expenses, $4.8 million in amortization of premium on marketable securities, and partially offset by $8.3 million in deferred taxes. Changes in operating assets and liabilities primarily consisted of a decrease of $68.6 million in accounts receivable mainly due to the timing of collections, and partially offset by a negative impact on decreases of $31.3 million in other current and non-current liabilities related to decreased accrued liabilities, customer deposits and contract liabilities, $25.3 million in

accounts payable mainly due to the timing of payments, and $4.8 million in operating and finance lease liabilities and an increase of $4.3 million in other current and long-term assets.

Cash provided by operating activities in 2021 was $538.6 million. The difference between net income and net cash provided by operating activities for the period was primarily due to the effect of $15.9 million in equity-based compensation expenses and $11.0 million in the depreciation and amortization. Changes in operating assets and liabilities primarily consisted of decreases of $52.5 million in income tax payable due to tax payments made during the current period and $12.2 million in accounts payable partially offset by the negative impact of a decrease of $42.3 million in accounts receivable mainly due to the timing of collections from customers and an increase of $13.1 million in accrued and other liabilities primary due to increased customer deposits and bonus accrual.

*Investing Activities*

Cash used in investing activities in 2022 was $261.3 million, which primarily related to $418.0 million in purchase of marketable securities, $172.7 million related to business acquisitions, $18.8 million related to the purchase of fixed assets consisting mainly of medical laboratory equipment and building improvement, $15.0 million related to the purchase of redeemable preferred stock and $10.0 million related to contingent consideration payouts related to business acquisitions, partially offset by $232.5 million related to maturities of marketable securities and $140.2 million related to proceeds from sales of marketable securities.

Cash used in investing activities in 2021 was $546.5 million, which primarily related to $710.5 million in purchases of marketable securities, $61.9 million related to business acquisitions, $23.8 million related to the purchase of fixed assets consisting mainly of medical laboratory equipment and building improvement, and $20.0 million related to the purchase of redeemable preferred stock, partially offset by proceeds of $185.7 million related to sales of marketable securities and $83.8 million related to maturities of marketable securities.

*Financing Activities*

Cash used in financing activities in 2022 was $77.1 million, which primarily related to $74.3 million used in the repurchase of common stock and $1.8 million used in common stock withholding for employee tax obligations.

Cash provided by financing activities in 2021 was $85.4 million, which primarily related to $89.5 million proceeds from an equity distribution agreement, partially offset by $4.2 million in common stock withholding for employee tax obligations.

**Stock Repurchase Program**

In March 2022, our Board authorized a $250.0 million stock repurchase program. The stock repurchase program has no expiration from the date of authorization. Under the stock repurchase program, the Company may repurchase shares from time to time in the open market or in privately negotiated transactions.

During the year ended December 31 2022, we repurchased 1.8 million shares of our common stock at an aggregate cost of $74.3 million under the stock repurchase program. As of December 31, 2022, a total of approximately $175.7 million remained available for future repurchases of our common stock under our stock repurchase programs.

**Material Cash Requirements and Contractual Obligations as of December 31, 2022**

As of December 31, 2022, we have an outstanding balance of $15.0 million under our margin account, $5.2 million in notes payable to Xilong Scientific, which is due in March 2023, and $3.8 million of an installment loan, of which, the current portion is $461,000. See Note 8, *Debt, Commitments and Contingencies*, of our consolidated financial statements included in this report.

The following summarizes our contractual obligations as of December 31, 2022:

| | Payments Due by Period | | | | |
|---|---|---|---|---|---|
| | Total | Less than 1 year | 1-3 years | 3-5 years | More than 5 years |
| | | | (in thousands) | | |
| Operating lease obligations [1] | $ 15,879 | $ 6,590 | $ 6,190 | $ 2,882 | $ 217 |
| Finance lease obligations[2] | 2,932 | 986 | 1,580 | 366 | — |
| Purchase obligations[3] | 10,089 | 7,544 | 2,545 | — | — |
| Total contractual obligations | $ 28,900 | $ 15,120 | $ 10,315 | $ 3,248 | $ 217 |

(1) Represents non-cancelable operating leases. For further information, refer to Note 9 to the Consolidated Financial Statements.

(2) Represents non-cancelable finance leases. For further information, refer to Note 9 to the Consolidated Financial Statements.

(3) Represents non-cancelable purchase obligations for medical lab equipment, reagents and other supplies, see Note 8 to the Consolidated Financial Statements.

## Critical Accounting Policies and Use of Estimates

This discussion and analysis is based on our consolidated financial statements included in this report, which have been prepared in accordance with U.S. Generally Accepted Accounting Principles, or U.S. GAAP. The preparation of consolidated financial statements in accordance with U.S. GAAP requires management to make certain estimates, judgments and assumptions and decisions that affect the reported amounts and related disclosures, including the selection of appropriate accounting principles and the assumptions on which to base accounting estimates. In making these estimates and assumptions and reaching these decisions, we apply judgment based on our understanding and analysis of the relevant circumstances, including historical data and experience available at the date of the consolidated financial statements, as well as various other factors management believes to be reasonable under the circumstances, including but not limited to valuation of intangible assets and goodwill in recent business combinations. Actual results could differ from our estimates. We are committed to incorporating accounting principles, assumptions and estimates that promote the representational faithfulness, verifiability, neutrality and transparency of the accounting information included in our consolidated financial statements.

While our significant accounting policies are described in more detail in the notes to the consolidated financial statements included in this report, we believe the accounting policies discussed below used in the preparation of our consolidated financial statements require the most significant estimates, judgments, assumptions and decisions.

### Revenue Recognition

We generate revenue from sales of our testing services. We currently receive payments from: insurance, institutional customers, including hospitals, medical institutions, other laboratories, governmental bodies, municipalities and large corporations, and patients who pay directly.

We recognize revenue in an amount that reflects the consideration to which we expect to be entitled in exchange for the transfer of promised goods or services to our customers. To determine revenue recognition for contracts with customers, the Company performs the following steps: (1) identifies the contract with the customer, (2) identifies the performance obligations in the contract, (3) determines the transaction price, (4) allocates the transaction price to the performance obligations in the contract, and (5) recognizes revenue when (or as) the entity satisfies a performance obligation.

Our test results are primarily delivered electronically. We bill certain customers for shipping and handling fees incurred by us associated with our tests, and shipping and handling fees billed to customers are included in revenue, and shipping and handling fees incurred are included in cost of revenue in the accompanying Consolidated Statements of Income.

While the transaction price is typically stated within the contract, we may accept payments from third-party payors that are less than the contractually stated price and is therefore variable consideration. Accounting for insurance contracts includes estimation of the transaction price, defined as the amount we expect to be entitled to receive in exchange for providing the services under the contract. Due to our out-of-network status with the majority of insurance payors for COVID-19 tests, estimation of the transaction price represents variable consideration.

### Valuation of Goodwill and Intangible Assets

The valuation of assets acquired in a business combination and asset impairment reviews require the use of significant estimates and assumptions. The acquisition method of accounting for business combinations requires us to estimate the fair value of assets acquired, liabilities assumed, and any noncontrolling interest in an acquired business to properly allocate purchase price consideration between assets that are depreciated or amortized and goodwill.

Long-lived assets, including property and equipment and intangible assets, excluding goodwill, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. An impairment loss would be recognized when estimated future cash flows expected from an asset and its eventual disposition is less than the carrying amount.

We evaluate goodwill annually or more frequently if events or changes in circumstances indicate that goodwill may be impaired. In accordance with guidance related to impairment testing, we have the option to first assess qualitative factors to determine

whether it is necessary to perform the quantitative goodwill impairment test. If the qualitative assessment option is not elected, or if the qualitative assessment indicates that it is more likely than not that the fair value is less than its carrying amount, a quantitative analysis is then performed. The quantitative analysis, if performed, compares the fair value of the reporting unit with its respective carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, including goodwill, goodwill is considered not to be impaired and no additional steps are necessary. If the fair value is less than the carrying amount, including goodwill, then an impairment adjustment must be recorded up to the carrying amount of goodwill.

**Recent Accounting Pronouncements**

See Note 2, *Summary of Significant Accounting Policies*, to our consolidated financial statements included in this report for information about recent accounting pronouncements.

**Off-Balance Sheet Arrangements**

We did not have, and do not currently have, any off-balance sheet arrangements during the periods presented, as defined in the rules and regulations of the SEC, that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenue or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk.**

We are exposed to market risks from fluctuations in interest rates and foreign currency translation, which may adversely affect our results of operations and financial condition.

***Interest Rate Risk***

We invest in marketable debt securities, including corporate debt securities, municipal bonds, U.S. government and agency debt securities, and debt instruments issued by foreign governments. Our investment policy and strategy are focused on the preservation of capital and supporting our liquidity requirements. We typically invest in highly rated securities, with the primary objective of minimizing the potential risk of principal loss. Our investments in fixed rate interest earning securities carry a degree of interest rate risk. Fixed rate securities may have their fair market value adversely affected due to a rise in interest rates. Unrealized gains or losses on our marketable debt securities are primarily due to interest rate fluctuations as compared to interest rates at the time of purchase. We measure our debt securities at fair value with gains and losses recorded in Other Comprehensive Income until the securities are sold, less any expected credit losses.

To provide a meaningful assessment of the interest rate risk associated with our investment portfolio, we performed a sensitivity analysis to determine the impact a change in interest rates would have on the value of the investment portfolio assuming a 100-basis point parallel shift in the yield curve. Based on investment positions as of December 31, 2022, a hypothetical 100 basis point increase in interest rates across all maturities would result in a $7.3 million incremental decline in the fair market value of the portfolio. Such losses would only be realized if we sold the investments prior to maturity.

***Foreign Currency Risk***

We transact business in multiple currencies, in addition, we translate the assets and liabilities of our non-U.S. dollar functional currency subsidiaries into U.S. dollars. Foreign assets, liabilities, revenues, as well as costs and expenses denominated in foreign currencies, expose us to the risk of fluctuations in foreign currency exchange rates against the U.S. dollar. Our foreign currency exposures are primarily concentrated in the Chinese yuan. For the purpose of analyzing foreign currency exchange risk, we considered the historical trends in foreign currency exchange rates and determined that it was reasonably possible that adverse changes in exchange rates of 10% could be experienced in the near term.

If an adverse 10% foreign currency exchange rate change was applied to total monetary assets denominated in currencies other than the functional currencies at the balance sheet date, it would have resulted in decrease on income before income taxes of approximately $844,000 as of December 31, 2022.

**Item 8. Financial Statements and Supplementary Data.**

The information required by this Item 8 immediately follows the signature page to this report and is incorporated herein by reference.

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.**

None.

**Item 9A. Controls and Procedures.**

**Evaluation of Disclosure Controls and Procedures**

Disclosure controls and procedures are controls and other procedures of a company that are designed to ensure that information required to be disclosed by the company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. As required by Rules 13a-15(b) and 15d-15(b) under the Exchange Act, our management, with the participation of our principal executive officer and principal financial officer, conducted an evaluation of the effectiveness of our disclosure controls and procedures as of December 31, 2022. Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2022.

**Internal Control over Financial Reporting**

*Changes in Internal Control over Financial Reporting.*

There has been no change in our internal control over financial reporting during the year ended December 31, 2022, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

In 2022, we completed the acquisition of Inform Diagnostics and Fulgent Pharma. See Note 15 of "Notes to Consolidated Financial Statements" for more information. We are currently integrating Inform Diagnostics and Fulgent Pharma into our operations and internal control processes. As we complete this integration, we are analyzing, evaluating, and where necessary, making changes in control and procedures related to the business of Inform Diagnostics and Fulgent Pharma, which we expect to complete within one year after the date of acquisition. Pursuant to the SEC's guidance that an assessment of a recently acquired business may be omitted from the scope of an assessment in the year of acquisition, the scope of our assessment of the effectiveness of our internal controls over financial reporting at December 31, 2022 excludes Inform Diagnostics and Fulgent Pharma to the extent that they are not yet integrated into our internal controls environment.

*Management's Annual Report on Internal Control over Financial Reporting*.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) of the Exchange Act. Our management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2022. Management reviewed the results of its assessment with our Audit and Compliance Committee. The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in its report, which is included in Item 8 of this Annual Report on Form 10-K.

As permitted by the Securities and Exchange Commission, companies are allowed to exclude acquisitions from their assessment of internal control over financial reporting during the first year of an acquisition. In 2022, we acquired Inform Diagnostics and Fulgent Pharma. Pursuant to applicable rules, because we have not yet fully incorporated the internal controls and procedures of the acquired entity into our internal control over financial reporting, management excluded the acquired businesses from our assessment of the effectiveness of internal control over financial reporting as of December 31, 2022. The Inform Diagnostics and Fulgent Pharma business represented 14% of our revenue and 20% of our total assets as of and for the year ended December 31, 2022.

**Inherent Limitations on Disclosure Controls and Procedures and Internal Control over Financial Reporting**

Management recognizes that any controls and procedures, no matter how well-designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the benefits of possible controls and procedures relative to their costs. Because of these inherent limitations, our disclosure and internal controls may not prevent or detect all instances of fraud, misstatements or other control issues. In addition, projections of any evaluation of the effectiveness of disclosure or internal controls to future periods are subject to risks, including, among others, that controls may become inadequate because of changes in conditions or that the degree of compliance with policies or procedures may deteriorate

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the stockholders and the Board of Directors of Fulgent Genetics, Inc.

**Opinion on Internal Control over Financial Reporting**

We have audited the internal control over financial reporting of Fulgent Genetics, Inc. and subsidiaries (the "Company") as of December 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2022, of the Company and our report dated February 28, 2023, expressed an unqualified opinion on those financial statements.

As described in "Management's Annual Report on Internal Control over Financial Reporting,"management excluded from its assessment the internal control over financial reporting at Inform Diagnostics, Inc. and Fulgent Pharma Holdings, Inc. which were acquired on April 26, 2022 and November 7, 2022, respectively, and whose financial statements constitute 14% of revenues and 20% of total assets of the consolidated financial statement amounts as of and for the year ended December 31, 2022. Accordingly, our audit did not include the internal control over financial reporting at Inform Diagnostics, Inc. and Fulgent Pharma Holdings, Inc.

**Basis for Opinion**

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's Annual Report on Internal Control over Financial Reporting".Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

**Definition and Limitations of Internal Control over Financial Reporting**

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP
Los Angeles, California

February 28, 2023

**Item 9B. Other Information.**

None

**Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.**

None

## PART III

**Item 10. Directors, Executive Officers and Corporate Governance.**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2023 annual meeting of stockholders or an amendment to this report, in either case to be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2022.

**Item 11. Executive Compensation.**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2023 annual meeting of stockholders or an amendment to this report, in either case to be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2022.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2023 annual meeting of stockholders or an amendment to this report, in either case to be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2022.

**Item 13. Certain Relationships and Related Transactions, and Director Independence.**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2023 annual meeting of stockholders or an amendment to this report, in either case to be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2022.

**Item 14. Principal Accounting Fees and Services.**

The information required by this item is incorporated by reference to the definitive proxy statement for our 2023 annual meeting of stockholders or an amendment to this report, in either case to be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2022.

## PART IV

**Item 15. Exhibits and Financial Statement Schedules.**

**(a)(1) Consolidated Financial Statements.**

The following financial statements are included immediately following the signature page hereof and are filed as part of this report:



**(a)(2) Financial Statement Schedules.**

All financial statement schedules have been omitted, as they are not required, not applicable, or the required information is otherwise included.

**(a)(3) Exhibits.**

The information required by this Item 15(a)(3) is set forth on the Exhibit Index immediately preceding the signature page of this report and is incorporated herein by reference.

**Item 16. Form 10-K Summary.**

None.

## EXHIBIT INDEX

| Exhibit Number | Description | Form | File Number | Incorporated by Reference Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| 2.1 | Agreement and Plan of Merger, dated September 16, 2016, by and among the registrant, Fulgent MergerSub, LLC and Fulgent Therapeutics LLC. | S-1/A | 333-213469 | 2.1 | 9/19/2016 | |
| 3.1 | Certificate of Incorporation of the registrant, dated May 13, 2016. | 10-Q | 001-37894 | 3.1 | 8/14/2017 | |
| 3.1.1 | Certificate of Amendment to Certificate of Incorporation of the registrant, dated August 2, 2016. | 10-Q | 001-37894 | 3.1.1 | 8/14/2017 | |
| 3.1.2 | Certificate of Amendment to Certificate of Incorporation of the registrant, dated May 17, 2017. | 10-Q | 001-37894 | 3.1.2 | 8/14/2017 | |
| 3.2 | Bylaws of the registrant. | S-1/A | 333-213469 | 3.2 | 9/26/2016 | |
| 4.1 | Form of Certificate of Common Stock of the registrant. | S-1/A | 333-213469 | 4.1 | 9/19/2016 | |
| 4.2 | Investor's Rights Agreement, dated May 17, 2016, by and between Fulgent Therapeutics LLC and Xi Long USA, Inc. | S-1 | 333-213469 | 4.2 | 9/2/2016 | |
| 4.3 | Description of the registrant's securities. | | | | | X |
| 10.1# | Form of Indemnification Agreement between the registrant and each of its officers and directors. | S-1 | 333-213469 | 10.1 | 9/2/2016 | |
| 10.2# | Amended and Restated 2015 Equity Incentive Plan of Fulgent Therapeutics LLC. | S-1 | 333-213469 | 10.2 | 9/2/2016 | |
| 10.3# | Form of Notice of Option Grant and Option Agreement under the Amended and Restated 2015 Equity Incentive Plan of Fulgent Therapeutics LLC. | S-1 | 333-213469 | 10.3 | 9/2/2016 | |
| 10.4# | Form of Notice of Profits Interest Grant and Profits Interest Agreement under the Amended and Restated 2015 Equity Incentive Plan of Fulgent Therapeutics LLC. | S-1 | 333-213469 | 10.4 | 9/2/2016 | |
| 10.5# | Form of Notice of Restricted Share Unit Grant and Restricted Share Unit Agreement under the Amended and Restated 2015 Equity Incentive Plan of Fulgent Therapeutics LLC. | S-1 | 333-213469 | 10.5 | 9/2/2016 | |
| 10.6# | 2016 Omnibus Incentive Plan of the registrant. | S-1/A | 333-213469 | 10.6 | 9/26/2016 | |
| 10.7# | Form of Notice of Stock Option Award and Stock Option Award Agreement under the 2016 Omnibus Incentive Plan of the registrant. | S-1 | 333-213469 | 10.7 | 9/2/2016 | |
| 10.8# | Form of Notice of Restricted Stock Unit Award and Restricted Stock Unit Agreement under the 2016 Omnibus Incentive Plan of the registrant. | 10-K | 001-37894 | 10.8 | 3/17/2017 | |
| 10.9# | Form of Option Substitution Award under the 2016 Omnibus Incentive Plan of the registrant. | S-1 | 333-213469 | 10.9 | 9/2/2016 | |

| Exhibit Number | Description | Form | File Number | Incorporated by Reference Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| 10.10# | Form of Notice of Restricted Stock Unit Substitution Award and Restricted Stock Unit Agreement under the 2016 Omnibus Incentive Plan of the registrant. | S-1 | 333-213469 | 10.10 | 9/2/2016 | |
| 10.11# | Employment Agreement, dated May 25, 2016, by and among Fulgent Therapeutics LLC, the registrant and Ming Hsieh. | S-1 | 333-213469 | 10.11 | 9/2/2016 | |
| 10.12# | Employment Agreement, dated May 25, 2016, by and among Fulgent Therapeutics LLC, the registrant and Paul Kim. | S-1 | 333-213469 | 10.12 | 9/2/2016 | |
| 10.13# | Amended and Restated Employment Agreement, dated May 25, 2016, by and among Fulgent Therapeutics LLC, the registrant and Han Lin Gao. | S-1 | 333-213469 | 10.13 | 9/2/2016 | |
| 10.14# | Severance Agreement, dated July 7, 2016, by and among Fulgent Therapeutics LLC, the registrant and Ming Hsieh. | S-1 | 333-213469 | 10.14 | 9/2/2016 | |
| 10.15# | Severance Agreement, dated July 7, 2016, by and among Fulgent Therapeutics LLC, the registrant and Paul Kim. | S-1 | 333-213469 | 10.15 | 9/2/2016 | |
| 10.16# | Severance Agreement, dated July 7, 2016, by and among Fulgent Therapeutics LLC, the registrant and Han Lin Gao. | S-1 | 333-213469 | 10.16 | 9/2/2016 | |
| 10.17 | Contribution and Allocation Agreement, dated May 19, 2016, by and among Fulgent Therapeutics LLC, Fulgent Pharma LLC and Ming Hsieh. | S-1 | 333-213469 | 10.17 | 9/2/2016 | |
| 10.18 | Form of Fourth Amended and Restated Operating Agreement of Fulgent Therapeutics LLC, to be in effect upon completion of the Reorganization. | S-1/A | 333-213469 | 2.1 | 9/19/2016 | |
| 10.19 | Commercial Leases, dated April 14, 2015, April 28, 2016, March 24, 2016 and August 1, 2016, by and between E & E Plaza LLC and Fulgent Therapeutics LLC. | S-1 | 333-213469 | 10.19 | 9/2/2016 | |
| 10.20 | Director Compensation Program of the registrant, effective as of September 28, 2016 and amended November 2, 2017. | 10-K | 001-37894 | 10.20 | 3/20/2018 | |
| 10.21§ | Cooperation Agreement on the Establishment of Fujian Fujun Gene Biotech Co., Ltd., dated April 25, 2017, by and among Shenzhen Fujin Gene Science & Technology Co., Ltd., Xilong Scientific Co., Ltd. and Fuzhou Jinqiang Investment Partnership (LP). | 10-Q | 001-37894 | 10.1 | 8/14/2017 | |
| 10.22§ | Supplemental Agreement to Cooperation Agreement, dated April 10, 2019, by and among Fulgent Genetics, Inc., Shenzhen Fujin Gene Technology Co., Ltd., Xilong Science Co., Ltd. and Fuzhou Jinqiang Investment Partnership (Limited). | 10-Q | 001-37894 | 10.1 | 8/12/2019 | |
| 10.23 | Commercial Lease, dated January 31, 2018, by and between E & E Plaza LLC and Fulgent Therapeutics LLC. | 10-K | 001-37894 | 10.23 | 3/22/2019 | |

| Exhibit Number | Description | Form | File Number | Incorporated by Reference Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| 10.24 | Equity Distribution Agreement, dated August 30, 2019, by and between Fulgent Genetics, Inc. and Piper Jaffray & Co. | 8-K | 001-37894 | 1.1 | 8/30/2019 | |
| 10.25 | Purchase Agreement, dated as of November 13, 2019, by and between Fulgent Genetics, Inc. and Piper Jaffray & Co. | 8-K | 001-37894 | 1.1 | 11/14/2019 | |
| 10.26 | Amendment No. 1 to Equity Distribution Agreement, dated August 4, 2020, by and between Fulgent Genetics, Inc. and Piper Sandler & Co. | 8-K | 001-37894 | 1.1 | 8/5/2020 | |
| 10.27 | Equity Distribution Agreement, dated as of September 24, 2020, by and between Fulgent Genetics, Inc. and Piper Sandler & Co. | 8-K | 001-37894 | 1.1 | 9/25/2020 | |
| 10.28 | Equity Distribution Agreement, dated as of November 20, 2020, by and between Fulgent Genetics, Inc. and Piper Sandler & Co., BTIG, LLC, and Oppenheimer & Co. Inc. | 8-K | 001-37894 | 1.1 | 11/20/2020 | |
| 10.29 | Fulgent Genetics, Inc. Amended and Restated 2016 Omnibus Incentive Plan | 8-K | 001-37894 | 10.1 | 5/21/2018 | |
| 10.30 | Fulgent Genetics, Inc. Amended and Restated 2016 Omnibus Incentive Plan | 8-K | 001-37894 | 10.1 | 9/18/2020 | |
| 10.31^ | Agreement for Purchase and Sale of Property, dated July 23, 2020 | 8-K | 001-37894 | 2.1 | 10/21/2020 | |
| 10.32^ | Aircraft Purchase Agreement, dated August 18, 2020, by and between ServiceMaster Acceptance Corporation and the Company | 10-Q | 001-37894 | 10.2 | 11/9/2020 | |
| 10.33 | Commercial Sublease Agreement, dated July 1st, 2020, between Medscan Laboratories Inc. and Fulgent Genetics, Inc.; Commercial Lease Agreement, dated June 17, 2020, by and between Medscan Laboratories Inc. and Ten-Voss Ltd. | 10-K | 001-37894 | 10.34 | 3/8/2021 | |
| 10.34 | Commercial Lease Assignment & Assumption, dated January 11, 2021 by and between Ten-Voss Ltd., Medscan Laboratories, Inc. and Fulgent Genetics, Inc. | 10-K | 001-37894 | 10.35 | 3/8/2021 | |
| 10.35 | Commercial Lease Addendum, dated February 1, 2021, by and between E & E Plaza LLC and Fulgent Genetics, Inc. | 10-K | 001-37894 | 10.36 | 3/8/2021 | |
| 10.36# | Employment Agreement, dated March 8, 2021, by and among Fulgent Therapeutics, LLC, Fulgent Genetics, Inc. and Jian Xie. | 10-K | 001-37894 | 10.37 | 3/8/2021 | |
| 10.37# | Severance Agreement, dated March 8, 2021, by and among Fulgent Therapeutics LLC, Fulgent Genetics, Inc. and Jian Xie. | 10-K | 001-37894 | 10.38 | 3/8/2021 | |
| 10.38#^ | Amended and Restated Non-Employee Director Compensation Policy. | 10-Q | 001-37894 | 10.1 | 5/7/2021 | |
| 10.39§ | Restructuring Agreement of Fujian Fujun Gene Biotech Co., Ltd. | 10-Q | 001-37894 | 10.1 | 8/10/2021 | |
| 10.40^ | Amended and Restated Commercial Lease Agreement, dated May 6, 2016, by and | 10-K | 001-37894 | 10.41 | 2/28/2022 | |

| Exhibit Number | Description | Form | File Number | Incorporated by Reference Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| | between Store Master Funding IX, LLC and Cytometry Specialists, Inc. | | | | | |
| 10.41# | Fulgent Genetics, Inc. Incentive Compensation Recoupment Policy. | 8-K | 001-37894 | 10.1 | 3/29/2022 | |
| 10.42 | Agreement and Plan of Merger by and among Fulgent Therapeutics LLC, solely for purpose of Section 6.20, Fulgent Genetics, Inc., Ducks Acquisition Sub, Inc., Symphony Buyer, Inc., solely in its capacity as the representative of Symphony's securityholders, Avista Capital Partners IV GP, L.P. and solely for purposes of Section 6.21, Article VIII and Section 10.14, those company stockholders set forth on the signature page thereto, dated as of April 16, 2022. | 8-K | 001-37894 | 2.1 | 4/26/2022 | |
| 10.43# | Amended and Restated Non-Employee Director Compensation Policy, dated as of August 1, 2022. | 10-Q | 001-37894 | 10.1 | 11/7/2022 | |
| 10.44# | Form of Notice of Restricted Stock Unit Award and Restricted Stock Unit Agreement under the Fulgent Pharma Holdings, Inc. 2022 Omnibus Incentive Plan | 10-Q | 001-37894 | 10.2 | 11/7/2022 | |
| 10.45^ | Agreement and Plan of Merger, by and among Fulgent Genetics, FG Merger Sub, Inc., Fulgent Pharma Holdings, Inc. and solely for purposes of Section 2.4, Section 5.5, Article VI, Section 7.8 and Section 7.14, those company stockholders set forth on the signature page thereto, dated November 7, 2022 | 10-Q | 001-37894 | 10.3 | 11/7/2022 | |
| 10.46 | Rule 10b5-1 Issuer Repurchase Plan, by and between Fulgent Genetics, Inc. and Piper Sandler & Co., dated December 15, 2022 | | | | | X |
| 10.47 | Commercial Lease Addendum (II), dated January 6, 2023, by and between Fulgent Therapeutics LLC and E&E Plaza LLC | 8-K | 001-37894 | 1.1 | 1/12/2023 | |
| 10.48^ | Commercial Lease Agreement, dated October 20, 2008, by and between Inform Diagnostics, Inc. and iSTAR CTL I, L.P. | | | | | X |
| 10.49 | Commercial Lease Amendment (I), dated December 30, 2013, by and between Inform Diagnostics, Inc. and LC Med Property TT, LLC | | | | | X |
| 10.50^ | Commercial Lease Amendment (II), dated February 3, 2014, by and between Inform Diagnostics, Inc. and LC Med Property TT, LLC | | | | | X |
| 10.51 | Commercial Lease Agreement by and between Inform Diagnostics and Crawford Street DE, LLC | | | | | X |
| 10.52# | 2022 Fulgent Pharma Holdings, Inc. Omnibus Incentive Plan | | | | | X |
| 21.1 | Subsidiaries of the registrant. | | | | | X |

| Exhibit Number | Description | Form | File Number | Incorporated by Reference Exhibit | Filing Date | Filed Herewith |
|---|---|---|---|---|---|---|
| 23.1 | Consent of Deloitte & Touche LLP, independent registered public accounting firm, relating to the financial statements of the registrant. | | | | | X |
| 24.1 | Power of Attorney (included on the signature page hereto) | | | | | X |
| 31.1 | Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 31.2 | Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 32.1* | Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 101.INS | Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document. | | | | | X |
| 101.SCH | Inline XBRL Taxonomy Extension Schema Document | | | | | X |
| 101.CAL | Inline XBRL Taxonomy Extension Calculation Linkbase Document | | | | | X |
| 101.DEF | Inline XBRL Taxonomy Extension Definition Linkbase Document | | | | | X |
| 101.LAB | Inline XBRL Taxonomy Extension Label Linkbase Document | | | | | X |
| 101.PRE | Inline XBRL Taxonomy Extension Presentation Linkbase Document | | | | | X |
| 104 | Cover Page Interactive Data File (embedded within the Inline XBRL document) | | | | | X |

* This certification is being furnished solely to accompany this report pursuant to 18 U.S.C. 1350, and are not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation by reference language in such filing.

# Management contract or compensatory plan, contract or arrangement.

§ Confidential treatment has been granted with respect to portions of this exhibit pursuant to Rule 24b-2 under the Exchange Act, and these confidential portions have been redacted from the version of this agreement that is incorporated by reference in this report. A complete copy of this exhibit, including the redacted portions, has been separately furnished to the SEC.

^ Certain exhibits and schedules have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company hereby undertakes to furnish supplementally a copy of any omitted exhibit or schedule upon request by the SEC.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**FULGENT GENETICS, INC.**

Date: February 28, 2023

By: /s/ Ming Hsieh
Ming Hsieh
Chief Executive Officer

## POWER OF ATTORNEY

IN WITNESS WHEREOF, each person whose signature appears below constitutes and appoints Ming Hsieh and Paul Kim as his true and lawful agent, proxy and attorney-in-fact, each acting alone, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to (i) act on and sign any amendments to this report, with exhibits thereto and other documents in connection therewith, (ii) act on and sign such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, and in each case file the same with the SEC, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

| Name and Signature | Title | Date |
|---|---|---|
| /s/ Ming Hsieh<br>Ming Hsieh | Chief Executive Officer and Chairman of the Board<br>(principal executive officer) | February 28, 2023 |
| /s/ Paul Kim<br>Paul Kim | Chief Financial Officer<br>(principal financial and accounting officer) | February 28, 2023 |
| /s/ Michael Nohaile<br>Michael Nohaile | Director | February 28, 2023 |
| /s/ Regina Groves<br>Regina Groves | Director | February 28, 2023 |
| /s/ Linda Marsh<br>Linda Marsh | Director | February 28, 2023 |

## INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the stockholders and the Board of Directors of Fulgent Genetics, Inc.

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Fulgent Genetics, Inc. and subsidiaries (the "Company") as of December 31, 2022, and 2021, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows, for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the "financial statements"). In our opinion, the 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 each of the three years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 28, 2023, expressed an unqualified opinion on the Company's internal control over financial reporting.

**Basis for Opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the 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 in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the 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 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

**Critical Audit Matters**

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

**Business Combinations—Inform Diagnostics Acquisition — Refer to Notes 2 and 15 to the financial statements**

*Critical Audit Matter Description*

The Company completed the acquisition of Symphony Buyer, Inc., or Inform Diagnostics on April 26, 2022, and accounted for the transaction under the acquisition method of accounting for business combinations. The Company allocated the purchase price to tangible and identified intangible assets acquired and liabilities assumed based on their respective fair values, including a customer relationship intangible asset in the amount of $54.0 million. Management estimated the fair value of the customer relationship intangible asset using the multi-period excess earnings method, which is a specific discounted cash flow method. The fair value determination of the customer relationship intangible asset required management to make significant estimates and assumptions related to future cash flows and the of the discount rate.

We identified the customer relationship intangible asset for Inform Diagnostics as a critical audit matter because of the significant estimates and assumptions management makes to fair value this asset. This required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, when performing audit procedures to evaluate the reasonableness of management’s forecasts of future cash flows and the selection of the discount rate for the customer relationship intangible asset.

*How the Critical Audit Matter Was Addressed in the Audit*

Our audit procedures related to forecasts of future cash flows and the selection of the discount rate for the customer relationship intangible asset included the following, among others:

- We tested the effectiveness of controls over the valuation of the customer relationship intangible asset, including management's controls over forecasts of future cash flows and selection of the discount rate.
- We assessed the reasonableness of management's forecasts of future cash flows by comparing the projections to historical results and certain peer companies.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the (1) valuation methodology and (2) discount rate by:
- We evaluated whether the estimated future cash flows were consistent with evidence obtained in other areas of the audit.

**Business Combinations—Fulgent Pharma Holdings, Inc. — Refer to Notes 2 and 15 to the financial statements**

The Company completed the acquisition of Fulgent Pharma Holdings, Inc. on November 7, 2022, and accounted for the transaction under the acquisition method of accounting for business combination. The Company allocated the purchase price to tangible and identified intangible assets acquired and liabilities assumed based on their respective fair values, which included an in-process research and development ("IPR&D") intangible asset, in the amount of $64.6 million. Management estimated the fair value of the IPR&D intangible asset using the multi-period excess earnings method, which is a specific discounted cash flow method. The fair value determination of the IPR&D intangible asset required management to make significant estimates and assumptions related to future cash flows and the selection of the discount rate.

We identified the IPR&D intangible asset for Fulgent Pharma Holdings, Inc. as a critical audit matter because of the significant estimates and assumptions management makes to fair value this asset. This required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, when performing audit procedures to evaluate the reasonableness of management's future cash flows and the selection of the discount rate for the IPR&D intangible asset.

*How the Critical Audit Matter Was Addressed in the Audit*

Our audit procedures related to forecasts of future cash flows and the selection of the discount rate for the IPR&D intangible asset included the following, among others:

- We tested the effectiveness of controls over the valuation of the IPR&D intangible asset, including management's controls over forecasts of future cash flows and selection of the discount rate.
- We assessed the reasonableness of management's forecasts of future cash flows by comparing the projections to relevant peer companies and third-party industry reports.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the (1) valuation methodology and (2) discount rate by:
- We evaluated whether the estimated future cash flows were consistent with evidence obtained in other areas of the audit.

/s/ DELOITTE & TOUCHE LLP
Los Angeles, California

February 28, 2023

We have served as the Company's auditor since 2016.

**FULGENT GENETICS, INC.**
**Consolidated Balance Sheets**
**(in thousands, except par value data)**

| | December 31, 2022 | December 31, 2021 |
|---|---|---|
| **Assets** | | |
| Current assets | | |
| Cash and cash equivalents | $ 79,506 | $ 164,894 |
| Marketable securities | 446,729 | 285,605 |
| Trade accounts receivable, net of allowance for credit losses of $41,205 and $11,217 | 52,749 | 138,912 |
| Other current assets | 48,889 | 22,549 |
| Total current assets | 627,873 | 611,960 |
| Marketable securities, long-term | 326,648 | 485,047 |
| Redeemable preferred stock investment | 12,385 | 21,965 |
| Fixed assets, net | 81,353 | 62,287 |
| Intangible assets, net | 150,643 | 35,914 |
| Goodwill | 143,027 | 50,897 |
| Other long-term assets | 44,124 | 10,650 |
| Total assets | $ 1,386,053 | $ 1,278,720 |
| **Liabilities and Stockholders' Equity** | | |
| Current liabilities | | |
| Accounts payable | $ 23,093 | $ 20,494 |
| Accrued liabilities | 24,981 | 17,689 |
| Income tax payable | — | 787 |
| Contract liabilities | 3,199 | 14,570 |
| Customer deposit | 10,895 | 19,806 |
| Investment margin loan | 14,999 | 15,137 |
| Contingent consideration | — | 10,000 |
| Notes payable, current portion | 5,639 | 6,147 |
| Other current liabilities | 5,301 | 680 |
| Total current liabilities | 88,107 | 105,310 |
| Unrecognized tax benefits | 9,836 | 725 |
| Other long-term liabilities | 18,235 | 6,805 |
| Total liabilities | 116,178 | 112,840 |
| Commitments and contingencies (Note 8) | | |
| Stockholders' equity | | |
| Common stock, $0.0001 par value per share, 50,000 shares authorized, 31,248 shares issued and 29,438 shares outstanding and 30,160 shares issued and outstanding | 3 | 3 |
| Preferred stock, $0.0001 par value per share, 1,000 shares authorized, no shares issued or outstanding | — | — |
| Additional paid-in capital | 486,585 | 501,908 |
| Accumulated other comprehensive loss | (20,903) | (759) |
| Retained earnings | 801,000 | 657,597 |
| Total Fulgent stockholders' equity | 1,266,685 | 1,158,749 |
| Noncontrolling interest | 3,190 | 7,131 |
| Total stockholders' equity | 1,269,875 | 1,165,880 |
| Total liabilities and stockholders' equity | $ 1,386,053 | $ 1,278,720 |

The accompanying notes are an integral part of these consolidated financial statements.

**FULGENT GENETICS, INC.**
**Consolidated Statements of Income**
**(in thousands, except per share)**

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| Revenue | $ 618,968 | $ 992,584 | $ 421,712 |
| Cost of revenue | 252,067 | 215,533 | 89,807 |
| Gross profit | 366,901 | 777,051 | 331,905 |
| Operating expenses: | | | |
| Research and development | 28,910 | 24,219 | 11,580 |
| Selling and marketing | 38,918 | 24,439 | 14,952 |
| General and administrative | 111,074 | 50,732 | 15,215 |
| Amortization of intangible assets | 6,497 | 1,708 | — |
| Restructuring costs | 2,975 | — | — |
| Total operating expenses | 188,374 | 101,098 | 41,747 |
| Operating income | 178,527 | 675,953 | 290,158 |
| Interest and other income, net | 5,498 | 1,347 | 1,526 |
| Income before income taxes, equity loss in investee and gain (loss) on equity-method investments | 184,025 | 677,300 | 291,684 |
| Provision for income taxes | 42,102 | 174,795 | 72,532 |
| Income before equity loss in investee and gain (loss) on equity-method investments | 141,923 | 502,505 | 219,152 |
| Equity loss in investee | — | — | (488) |
| Gain (loss) on equity-method investments | — | 3,734 | (4,354) |
| Net income from consolidated operations | 141,923 | 506,239 | 214,310 |
| Net loss attributable to noncontrolling interests | 1,480 | 1,125 | — |
| Net income attributable to Fulgent | $ 143,403 | $ 507,364 | $ 214,310 |
| | | | |
| Net income per common share attributable to Fulgent: | | | |
| Basic | $ 4.76 | $ 17.25 | $ 9.44 |
| Diluted | $ 4.63 | $ 16.38 | $ 8.91 |
| | | | |
| Weighted-average common shares: | | | |
| Basic | 30,097 | 29,408 | 22,694 |
| Diluted | 30,964 | 30,976 | 24,056 |

The accompanying notes are an integral part of these consolidated financial statements.

**FULGENT GENETICS, INC.**
**Consolidated Statements of Comprehensive Income**
**(in thousands)**

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| **Net income from consolidated operations** | $ 141,923 | $ 506,239 | $ 214,310 |
| **Other comprehensive income (loss):** | | | |
| Foreign currency translation (loss) gain | (2,665) | 456 | 20 |
| Net (loss) gain on available-for-sale debt securities, net of tax | (19,940) | (1,548) | 272 |
| **Comprehensive income from consolidated operations** | 119,318 | 505,147 | 214,602 |
| Net loss attributable to noncontrolling interest | 1,480 | 1,125 | — |
| Foreign currency translation loss (gain) attributable to noncontrolling interest | 2,461 | (105) | — |
| **Comprehensive loss attributable to noncontrolling interest** | 3,941 | 1,020 | — |
| **Comprehensive income attributable to Fulgent** | $ 123,259 | $ 506,167 | $ 214,602 |

The accompanying notes are an integral part of these consolidated financial statements.

**FULGENT GENETICS, INC.**
**Consolidated Statements of Stockholders' Equity**
**(in thousands)**

| | Fulgent Stockholders' Equity | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Additional Paid-In Capital | Accumulated Other Comprehensive Income (Loss) | Retained Earnings (Accumulated Deficit) | Fulgent Stockholders' Equity | Noncontrolling Interest | Total Equity |
| **Balance at January 1, 2020** | 21,483 | $ 2 | $ 146,058 | $ 146 | $ (63,429) | $ 82,777 | $ — | $ 82,777 |
| Equity-based compensation | — | — | 8,157 | — | — | 8,157 | — | 8,157 |
| Exercise of common stock options | 56 | — | 104 | — | — | 104 | — | 104 |
| Restricted stock awards | 655 | — | — | — | — | — | — | — |
| Issuance of common stock at an average of $38.50 per share, net | 1,108 | — | 42,655 | — | — | 42,655 | — | 42,655 |
| Issuance of common stock at an average of $42.90 per share, net | 2,846 | 1 | 122,102 | — | — | 122,103 | — | 122,103 |
| Issuance of common stock at an average of $48.70 per share, net | 2,034 | — | 99,051 | — | — | 99,051 | — | 99,051 |
| Common stock withholding for employee tax obligations | (4) | — | (62) | — | — | (62) | — | (62) |
| Other comprehensive gain, net | — | — | — | 292 | — | 292 | — | 292 |
| Net income | — | — | — | — | 214,310 | 214,310 | — | 214,310 |
| **Balance at December 31, 2020** | 28,178 | 3 | 418,065 | 438 | 150,881 | 569,387 | — | 569,387 |
| Equity-based compensation | — | — | 15,882 | — | — | 15,882 | — | 15,882 |
| Exercise of common stock options | 76 | — | 86 | — | — | 86 | — | 86 |
| Restricted stock awards | 836 | — | — | — | — | — | — | — |
| Issuance of common stock at an average of $64.83 per share, net | 1,111 | — | 72,030 | — | — | 72,030 | — | 72,030 |
| Common stock withholding for employee tax obligations | (41) | — | (4,155) | — | — | (4,155) | — | (4,155) |
| Cumulative effect of accounting change | — | — | — | — | (887) | (887) | — | (887) |
| Cumulative tax effect of accounting change | — | — | — | — | 239 | 239 | — | 239 |
| Noncontrolling interest assumed related to acquisitions | — | — | — | — | — | — | 8,151 | 8,151 |
| Other comprehensive loss, net | — | — | — | (1,197) | — | (1,197) | 105 | (1,092) |
| Net income (loss) | — | — | — | — | 507,364 | 507,364 | (1,125) | 506,239 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Balance at December 31, 2021** | 30,160 | 3 | 501,908 | (759) | 657,597 | 1,158,749 | 7,131 | 1,165,880 |
| Equity-based compensation | — | — | 32,640 | — | — | 32,640 | — | 32,640 |
| Exercise of common stock options | 5 | — | 31 | — | — | 31 | — | 31 |
| Restricted stock awards | 699 | — | — | — | — | — | — | — |
| Common stock withholding for employee tax obligations | (32) | — | (1,768) | — | — | (1,768) | — | (1,768) |
| Repurchase of common stock | (1,810) | — | (74,337) | — | — | (74,337) | — | (74,337) |
| Common stock issued in a business combination (1) | 416 | — | 28,111 | — | — | 28,111 | — | 28,111 |
| Other comprehensive loss, net | — | — | — | (20,144) | — | (20,144) | (2,461) | (22,605) |
| Net income (loss) | — | — | — | — | 143,403 | 143,403 | (1,480) | 141,923 |
| **Balance at December 31, 2022** | 29,438 | $ 3 | $ 486,585 | $ (20,903) | $ 801,000 | $ 1,266,685 | $ 3,190 | $ 1,269,875 |

(1) As of December 31, 2022, 371,006 shares of the Company's common stock were not issued and heldback by the Company as partial security for the indemnification obligations in connection with the business combination of Fulgent Pharma.

The accompanying notes are an integral part of these consolidated financial statements.

**FULGENT GENETICS, INC.**
**Consolidated Statements of Cash Flows**
**(in thousands)**

| | Year Ended December 31, | | |
|---|---|---|---|
| | **2022** | **2021** | **2020** |
| **Cash flow from operating activities:** | | | |
| Net income from consolidated operations | $ 141,923 | $ 506,239 | $ 214,310 |
| Adjustments to reconcile net income to net cash provided by operating activities: | | | |
| Equity-based compensation | 32,640 | 15,882 | 8,157 |
| Depreciation and amortization | 32,662 | 11,004 | 2,962 |
| Provision for credit losses | 32,596 | 8,931 | 1,170 |
| Noncash lease expense | 4,913 | 1,154 | 409 |
| Loss on disposal of fixed asset | 502 | 850 | 672 |
| Amortization of premium of marketable securities | 4,767 | 7,596 | 857 |
| Deferred taxes | (8,280) | (8,188) | (1,775) |
| Unrecognized tax benefits | 9,111 | 348 | 377 |
| Net loss on marketable securities | 692 | 1,186 | 90 |
| Equity loss in investee | — | — | 488 |
| (Gain) loss in equity-method investments | — | (3,734) | 4,354 |
| Other | (11) | (15) | 8 |
| Changes in operating assets and liabilities: | | | |
| Trade accounts receivable | 68,638 | 42,300 | (178,480) |
| Other current and long-term assets | (4,337) | 7,804 | (21,149) |
| Accounts payable | (25,339) | (12,206) | 22,617 |
| Accrued liabilities and other liabilities | (31,299) | 13,081 | 32,655 |
| Income tax payable | (827) | (52,532) | 53,295 |
| Operating and finance lease liabilities | (4,831) | (1,123) | (389) |
| Net cash provided by operating activities | 253,520 | 538,577 | 140,628 |
| **Cash flow from investing activities:** | | | |
| Purchases of fixed assets | (18,775) | (23,812) | (35,130) |
| Purchases of intangible assets | — | (32) | — |
| Proceeds from sale of fixed assets | 412 | 63 | 8 |
| Purchase of marketable securities | (417,982) | (710,490) | (324,359) |
| Purchase of preferred stock of privately held company | (15,000) | — | — |
| Contingent consideration payout related to a business acquisition | (10,000) | — | — |
| Purchase of redeemable preferred stock | — | (20,000) | — |
| Maturities of marketable securities | 232,534 | 83,842 | 19,919 |
| Proceeds from sale of marketable securities | 140,176 | 185,749 | 17,095 |
| Acquisition of businesses, net of cash acquired | (172,679) | (61,868) | — |
| Investment in equity-method investees | — | — | (3,971) |
| Net cash used in investing activities | (261,314) | (546,548) | (326,438) |
| **Cash flow from financing activities:** | | | |
| Repurchase of common stock | (74,337) | — | — |
| Common stock withholding for employee tax obligations | (1,768) | (4,155) | (62) |
| Proceeds from public offerings of common stock, net of issuance costs | — | 89,475 | 246,190 |
| Proceeds from noncontrolling interest | — | 10 | — |
| Proceeds from exercise of stock options | 31 | 86 | 104 |
| Principal paid for finance leases | (700) | (7) | — |
| Repayment of notes payable | (367) | (4) | — |
| Borrowing under margin account | — | — | 15,019 |
| Net cash (used in) provided by financing activities | (77,141) | 85,405 | 261,251 |
| Effect of exchange rate changes on cash and cash equivalents | (453) | 34 | 20 |
| **Net (decrease) increase in cash and cash equivalents** | (85,388) | 77,468 | 75,461 |
| **Cash and cash equivalents at beginning of period** | 164,894 | 87,426 | 11,965 |
| **Cash and cash equivalents at end of period** | $ 79,506 | $ 164,894 | $ 87,426 |
| **Supplemental disclosures of cash flow information:** | | | |
| Income taxes paid | $ 56,193 | $ 237,069 | $ 20,612 |
| **Supplemental disclosures of non-cash investing and financing activities:** | | | |
| Stock consideration in a business combination | $ 28,111 | $ — | $ — |
| Maturities of marketable securities in other current assets | $ 19,120 | $ — | $ — |
| Purchases of fixed assets in notes payable | $ 3,833 | $ — | $ — |
| Purchases of fixed assets in accounts payable | $ 2,989 | $ 1,075 | $ 3,402 |
| Finance lease right-of-use assets obtained in exchange for lease liabilities | $ 573 | $ 1,693 | $ — |
| Operating lease right-of-use assets reduced due to lease modification or termination | $ 66 | $ 399 | $ 1,853 |
| Operating lease right-of-use assets obtained in exchange for lease liabilities | $ 52 | $ 1,797 | $ 402 |
| Contingent consideration for business acquisition included in current liabilities | $ — | $ 10,000 | $ — |
| Public offerings proceeds in other receivable included in other current assets | $ — | $ — | $ 17,799 |
| Public offerings costs included in accounts payable | $ — | $ 5 | $ 359 |

The accompanying notes are an integral part of these consolidated financial statements.

## Note 1. Overview and Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America, or U.S. GAAP. These financial statements include the assets, liabilities, revenues and expenses of all subsidiaries and entities in which the Company has a controlling financial interest or is deemed to be the primary beneficiary. In determining whether the Company is the primary beneficiary of an entity, the Company applies a qualitative approach that determines whether it has both (i) the power to direct the economically significant activities of the entity and (ii) the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to that entity. The Company uses the equity method to account for its investments in entities that it does not control, but in which it has the ability to exercise significant influence over operating and financial policies. All intercompany accounts and transactions are eliminated from the accompanying consolidated financial statements.

### *Nature of the Business*

Fulgent Genetics, Inc., together with its subsidiaries and affiliated professional corporations, or PCs, collectively referred to as the Company, unless otherwise noted or the context otherwise requires, is a technology-based company with a well-established clinical diagnostic business and a therapeutic development business. Its clinical diagnostic business offers molecular diagnostic testing services, comprehensive genetic testing, and high-quality anatomic pathology laboratory services designed to provide physicians and patients with clinically actionable diagnostic information to improve the quality of patient care. Its therapeutic development business is focused on developing drug candidates for treating a broad range of cancers using a novel nanoencapsulation and targeted therapy platform designed to improve the therapeutic window and pharmacokinetic profile of new and existing cancer drugs. The Company aims to transform from a genomic diagnostic business into a fully integrated precision medicine company.

## Note 2. Summary of Significant Accounting Policies

### *Use of Estimates*

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting periods. These estimates, judgments and assumptions are based on historical data and experience available at the date of the accompanying consolidated financial statements, as well as various other factors management believes to be reasonable under the circumstances, including but not limited to the potential impacts arising from the recent global pandemic related to COVID-19. The Company's estimates and assumptions may evolve as conditions change. Actual results could differ significantly from these estimates.

On an on-going basis, management evaluates its estimates, primarily those related to: (i) revenue recognition criteria, (ii) accounts receivable and allowances for credit losses, (iii) the useful lives of fixed assets and intangible assets, (iv) estimates of tax liabilities, (v) valuation of intangible assets and goodwill at time of acquisition and on a recurring basis, and (vi) valuation of investments.

### *Principles of Consolidation*

The accompanying consolidated financial statements include the accounts of the Company and its subsidiaries and PC. All intercompany transactions and balances have been eliminated in consolidation.

### *Cash and Cash Equivalents*

The Company considers all highly liquid investments with original maturities of three months or less at the date of purchase to be cash equivalents. Cash and cash equivalents include cash held in banks and money market accounts. Cash equivalents are stated at fair value. Cash and cash equivalent as of December 31, 2022 includes $5.0 million restricted cash related to a share transfer agreement entered by Fulgent Pharma Holdings, Inc., or Fulgent Pharma, pre-acquisition, see Note 15, *Business Combinations*.

### *Marketable Securities*

All marketable debt securities, which consist of corporate debt securities, municipal bonds, U.S. government and agency debt securities, U.S. treasury bills, and Yankee debt securities issued by foreign governments or entities and denominated in U.S. dollars have been classified as "available-for-sale," and are carried at fair value. Net unrealized gains and losses, net of any related tax effects,

are excluded from earnings and are included in other comprehensive income (loss) and reported as a separate component of stockholders' equity until realized. Realized gains and losses on marketable debt securities are included in interest and other income, net, in the accompanying Consolidated Statements of Income. The cost of any marketable debt securities sold is based on the specific-identification method. The amortized cost of marketable debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. Interest on marketable debt securities is included in interest and other income, net. In accordance with the Company's investment policy, management invests to diversify credit risk and only invests in securities with high credit quality, including U.S. government securities.

The Company's investments in marketable equity securities are measured at fair value with the related gains and losses, realized and unrealized, recognized in interest and other income, net, in the accompanying Consolidated Statements of Income. The cost of any marketable equity securities sold is based on the specific-identification method.

For available-for-sale debt securities, in an unrealized loss, the Company determines whether a credit loss exists. The credit loss is estimated by considering available information relevant to the collectability of the security and information about past events, current conditions, and reasonable and supportable forecasts. The Company compares the present value of cash flows expected to be collected from the security with the amortized cost basis of the security. If the present value of cash flows to be collected is less than the amortized basis of the security, a credit loss exists, and an allowance for credit losses is recorded for the credit loss, limited by the amount of unrealized loss. Changes in the allowance are recorded in the period of changes as credit loss expense. If the Company has an intent to sell, or if it is more likely than not that the Company will be required to sell a debt security in an unrealized loss position before recovery of its amortized cost basis, the Company will write down the security to its fair value and record the corresponding charge as a component of interest and other income, net.

***Trade Accounts Receivable and Allowance for Credit Losses***

Trade accounts receivable are stated at the amount the Company expects to collect. The Company maintains an allowance for credit losses for expected uncollectible trade accounts receivable, which is recorded as an offset to trade accounts receivable, and changes in allowance for credit losses are classified as a general and administrative expense in the accompanying Consolidated Statements of Income. The Company assesses collectability by reviewing trade accounts receivable on a collective basis where similar risk characteristics exist and on an individual basis when it identifies specific customers that have deterioration in credit quality such that they may no longer share similar risk characteristics with the other receivables. In determining the amount of the allowance for credit losses, the Company uses a probability-of-default and loss given default model, which allows the ability to define a point of default and measure credit losses for receivables that have reached the point of default for purposes of calculating the allowance for credit losses. Loss given default represents the likelihood that a receivable that has reached the point of default will not be collected in full. The Company updates its probability-of-default and loss given default factors annually to incorporate the most recent historical data and adjusts the quantitative portion of the reserve through its qualitative reserve overlay. The Company looks at qualitative factors such as general economic conditions in determining expected credit losses.

A roll-forward of the activity in the Company's allowance for credit losses is as follows:

| | December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | | (in thousands) | |
| Allowance for credit losses at beginning of year | $ 11,217 | $ 1,898 | $ 751 |
| Impact of ASU 2016-13 adoption | — | 887 | — |
| Current period provision | 32,596 | 8,931 | 1,170 |
| Write-downs | (2,608) | (499) | (23) |
| Allowance for credit losses at end of year | $ 41,205 | $ 11,217 | $ 1,898 |

***Redeemable Preferred Stock Investment***

The redeemable preferred stock investment of $12.4 million of December 31, 2022 represents the fair value of redeemable preferred stock of a private company that the Company purchased in July 2021. The investment is classified as available-for-sale debt securities. The fair value of available-for-sale debt security is included in the Consolidated Statement of Balance Sheets. Unrealized losses of $9.6 million were excluded from earnings and reported in other comprehensive income (loss) for the year ended December 31, 2022. Unrealized gains of $2.0 million are excluded from earnings and reported in other comprehensive income (loss) for the year ended December 31, 2021. Since the Company intends on holding the preferred stock, and the preferred stock is not redeemable until July 2027, the investment is recorded as a long-term investment.

***Fixed Assets***

Fixed assets are recorded at cost, net of accumulated depreciation and amortization. Depreciation is recorded using the straight-line method over the estimated useful lives of the assets. Leasehold improvements are capitalized and amortized over the shorter of their expected lives or the applicable lease term, including renewal options, if available. Major replacements and improvements are capitalized, while general repairs and maintenance are expensed as incurred. See Note 5, *Fixed Assets*, for useful lives for each major class of fixed assets.

***Intangible assets***

Intangible assets, unless determined to be indefinite-lived, are amortized over their estimated useful lives. The Company amortizes intangible assets on a straight-line basis with definite lives generally over periods ranging from five to fourteen years. In-process research and development costs, or IPR&D, are considered to be indefinite-lived until the completion or abandonment of the associated research and development efforts. If and when development is complete, the associated assets would be deemed finite-lived and would then be amortized based on their respective estimated useful lives at that point in time. During this period, the assets will not be amortized but will be tested for impairment on an annual basis and between annual tests if we become aware of any events occurring or changes in circumstances that would indicate a reduction in the fair value of the IPR&D projects below their respective carrying amounts. See Note 17, *Goodwill and Intangible Assets*, for details of intangible assets.

***Business Combinations***

The Company uses the acquisition method of accounting and allocates the fair value of purchase consideration to the assets acquired and liabilities assumed from an acquiree based on their respective fair values as of the acquisition date. The excess of the fair value of purchase consideration over the fair value of these assets acquired and liabilities assumed is recorded as goodwill. When determining the fair values of assets acquired and liabilities assumed, management makes significant estimates and assumptions, especially with respect to intangible assets. Critical estimates in valuing intangible assets include, but are not limited to, expected future cash flows, which includes consideration of future growth and margins, future changes in technology, expected cost and time to develop in-process research and development, brand awareness and discount rates. Fair value estimates are based on the assumptions that management believes a market participant would use in pricing the asset or liability.

***Goodwill***

Goodwill is not amortized but is subject to impairment tests on an annual basis or more frequently if indicators of potential impairment exist, and compares the fair value of the reporting unit in which the goodwill resides to its carrying value. Goodwill is written down when it is determined to be impaired.

***Impairment of Long-Lived Assets***

The Company evaluates the carrying amount of its long-lived assets whenever events or changes in circumstances indicate that the assets may not be recoverable. An impairment loss would be recognized when estimated future cash flows expected to result from the use of an asset and its eventual disposition is less than the carrying amount of the asset.

***Reagents and Supplies***

The Company maintains reagents and other consumables primarily used in testing which are valued at the lower of cost or net realizable value. Cost is determined using actual costs on a first-in, first-out basis. The reagents and other consumables were included in other current assets in the accompanying Consolidated Balance Sheets.

***Fair Value of Financial Instruments***

The Company's financial instruments consist principally of cash and cash equivalents, marketable securities, trade accounts receivable, redeemable preferred stock investment, accounts payable, accrued liabilities, investment margin loan, and contingent consideration. The carrying amounts of certain of these financial instruments, including cash and cash equivalents, accounts receivable, accounts payable, accrued liabilities, investment margin loan, and contingent consideration approximate fair value due to their short maturities. Fair value of marketable securities and redeemable preferred stock investment is disclosed in Note 4, Fair Value Measurements, to the accompanying consolidated financial statements.

***Concentrations of Credit Risk, Customers and Suppliers***

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash and cash equivalents, trade accounts receivable and marketable securities, which consist of debt securities and equity securities. As of December 31, 2022, substantially all of the Company's cash and cash equivalents were deposited in accounts at financial institutions, and amounts may exceed federally insured limits. Management believes that the Company is not exposed to significant credit risk due to the financial strength of the depository institutions in which its cash and cash equivalents are held.

In certain periods, a small number of customers has accounted for a significant portion of the Company's revenue. Aggregating customers under common control, one customer comprised 19% and 26% of total revenue in the years ended December 31, 2022 and 2021, respectively, and two customers comprised 28% and 10% of total revenue in the year ended December 31, 2020. One customer comprised 17% of total accounts receivable, net, as of December 31, 2022, and no customer comprised at least 10% of total accounts receivable, net, as of December 31, 2021.

The Company relies on a limited number of suppliers for its test collection kits and certain laboratory substances used in the chemical reactions incorporated into its processes, referred to as reagents, as well as for the sequencers and various other equipment and materials it uses in its laboratory operations. In particular, the Company relies on a sole supplier for the next generation sequencers and associated reagents it uses to perform its genetic tests and as the sole provider of maintenance and repair services for these sequencers. The Company's laboratory operations would be interrupted if it encountered delays or difficulties securing these test collection kits, reagents, sequencers, other equipment or materials or maintenance and repair services, which could occur for a variety of reasons, including if the Company needs a replacement or temporary substitute for any of its limited or sole suppliers and is not able to locate and make arrangements with an acceptable replacement or temporary substitute. The Company believes there are currently only a few other manufacturers that are capable of supplying and servicing some of the equipment and other materials necessary for its laboratory operations, including collection kits, sequencers and various associated reagents.

***Equity Method Investments***

The Company uses the equity method to account for investments in entities that it does not control, but in which it has the ability to exercise significant influence over operating and financial policies. The Company's 25% interest in BostonMolecules was accounted for using the equity method, and the carrying value was zero as of December 31, 2022 and 2021 due to the impairment loss recorded in 2020.

The Company's proportionate share of the net income or loss of these companies were included in consolidated net earnings. Judgments regarding the level of influence over each equity method investment include consideration of key factors such as the Company's ownership interest, representation on the board of directors or other management body and participation in policy-making decisions.

The Company evaluates any equity method investments for impairment whenever events or changes in circumstances would indicate that a decline in value has occurred that is other than temporary. Evidence considered in this evaluation would include, but would not necessarily be limited to, the financial condition and near-term prospects of the investee, recent operating trends and forecasted performance of the investee, market conditions in the geographic area or industry in which the investee operates and the Company's strategic plans for holding the investment in relation to the period of time expected for an anticipated recovery of its carrying value. If the investments were determined to have a decline in value deemed to be other than temporary it is written down to estimated fair value.

***Leases***

The Company determines if an arrangement is a lease at inception by evaluating whether the arrangement conveys the right to use an identified asset and whether the Company obtains substantially all of the economic benefits from and has the ability to direct the use of the asset. Operating and finance lease right-of-use assets, or ROU assets, short-term lease liabilities, and long-term lease liabilities are included in other long-term assets, accrued liabilities, and other long-term liabilities, respectively, in the accompanying Consolidated Balance Sheets.

Lease ROU assets represent the Company's right to use an underlying asset for the lease term. Lease liabilities represent the Company's obligation to make lease payments arising from the lease. Lease ROU assets and liabilities are recognized at the commencement date based on the present value of lease payments over the lease term, including options to extend the lease when it is reasonably certain that the Company will exercise that option. The Company uses its incremental borrowing rate based on the information available at the commencement date, including inquiries with its bank, in determining the present value of lease payments when its leases do not provide an implicit or explicit rate. Lease ROU assets consist of initial measurement of lease liabilities, any lease payments made to lessor on or before the lease commencement date, minus any lease incentive received, and any initial direct

costs incurred by the Company. Operating lease expense for lease payments is recognized on a straight-line basis over the lease term. For finance lease, ROU assets are amortized on a straight-line basis from the commencement date to the earlier of the end of useful life of the ROU assets or the end of the lease term. Amortization of ROU assets and interest on the lease liability for finance leases are included as charges to the accompanying Consolidated Statements of Income.

Lease ROU assets and liabilities arising from business combinations are recognized and measured at the acquisition dates as if an acquired lease were a new lease at the date of acquisition using the Company's incremental borrowing rate unless the discount rate is implicit in the lease. The Company elects to not to recognize assets or liabilities as of the acquisition dates for leases that, on the acquisition dates, have a remaining lease term of 12 months or less. The Company also retains the acquirees' classification of the leases if there are no modifications as part of the business combinations.

The Company leases out space in buildings it owns to third-party tenants or subtenants under noncancelable operating leases. The Company recognizes lease payments as income over the lease terms on a straight-line basis and recognizes variable lease payments as income in the period in which the changes in facts and circumstances on which the variable lease payments are based occur. The net rental income is included in the interest and other income, net, in the accompanying Consolidated Statements of Income.

***Software for Internal Use***

The Company capitalizes certain costs incurred to purchase computer software for internal use. These costs include purchased software packages for Company use. Capitalized computer software costs are amortized over the estimated useful life of the computer software, which is generally one to five years. Internally developed software costs are capitalized after management has committed to funding the project, it is probable that the project will be completed and the software will be used for its intended function. Costs that do not meet that criteria and costs incurred on projects in the preliminary and post-implementation phases are expensed as incurred.

***Reporting Segment and Geographic Information***

Reporting segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker in making decisions regarding resource allocation and assessing performance. The Company's chief operating decision maker is its Chief Executive Officer. The Company views its operations and manages its business in one reporting segment.

***Revenue Recognition***

The Company generates revenue from sales of its testing services. The Company currently receives payments from primarily three different customer types: insurance, institutional customers, including hospitals, medical institutions, other laboratories, governmental bodies, municipalities and large corporations, and patients who pay directly.

The Company recognizes revenue in an amount that reflects the consideration to which it expects to be entitled in exchange for the transfer of promised goods or services to its customers. To determine revenue recognition for contracts with customers, the Company performs the following steps described in the Accounting Standards Codification, or ASC 606, *Revenue from Contracts with Customers*: (1) identifies the contract with the customer, or Step 1, (2) identifies the performance obligations in the contract, or Step 2, (3) determines the transaction price, or Step 3, (4) allocates the transaction price to the performance obligations in the contract, or Step 4, and (5) recognizes revenue when (or as) the entity satisfies a performance obligation, or Step 5.

The Company's test results are primarily delivered electronically. The Company bills certain customers for shipping and handling fees incurred by the Company, and shipping and handling fees billed to customers are included in revenue, and shipping and handling fees incurred are included in cost of revenue in the accompanying Consolidated Statements of Income.

***Performance Obligations***

*Institutional and Patient Direct Pay*

The Company's institutional contracts for its testing services typically have a single performance obligation to deliver testing services to the ordering facility or patient. Some arrangements involve the delivery of genetic testing services to research institutions, which the Company refers to as "sequencing as a service." In arrangements with institutions, including hospitals, medical institutions, other laboratories, governmental bodies, municipalities and large corporations, and patients who pay directly, the transaction price is stated within the contract and is therefore fixed consideration. For most of the Company's testing volume, the Company identified the institutions, including hospitals, medical institutions, other laboratories, governmental bodies, municipalities and large corporations, and patients as the customer in Step 1 and have determined a contract exists with those customers in Step 1. As these contracts

typically have a single performance obligation, no allocation of the transaction price is required in Step 4. Control over testing services is transferred to the Company's ordering facility at a point in time. Specifically, the Company determined the customer obtains control of the promised service upon delivery of test results.

*Insurance*

The Company's insurance contracts for testing services typically have a single performance obligation to deliver testing services to the ordering facility or patient. For most of the Company's insurance volume, the Company identified the patient as the customer in Step 1 and determined a contract exists with the patient in Step 1. In arrangements with insurance patients, the transaction price is typically stated within the contract, however, the Company may accept payments from third-party payors that are less than the contractually stated price and is therefore variable consideration. In developing the estimate of variable consideration, the Company utilizes the expected value method under a portfolio approach. The Company's estimate requires significant judgment and is developed using known reimbursement rates and historical reimbursement data from payors and patients. As these contracts typically have a single performance obligation, no allocation of the transaction price is required in Step 4. Control over testing services is transferred to the Company's ordering parties at a point in time. Specifically, the Company determined the customer obtains control of the promised service upon delivery of the test results.

Certain incremental costs pertaining to both insurance and institutional, such as commissions, are incurred in obtaining contracts. Contract costs are capitalized if the Company expects to recover them, and amortization of contract costs is classified in the general and administrative expense in the Consolidated Statements of Income. Historically contract costs have not been significant to the financial statements.

***Significant Judgments and Contract Estimates***

Accounting for insurance contracts includes estimation of the transaction price, defined as the amount the Company expects to be entitled to receive in exchange for providing the services under the contract. Due to the Company's out-of-network status with the majority of insurance payors for COVID-19 tests, estimation of the transaction price represents variable consideration.

***Contract Liabilities***

Contract liabilities are recorded when the Company receives payment or bills prior to completing its obligation to transfer goods or services to a customer, and the Company subsequently recognizes contract liabilities as revenue in the period in which the applicable revenue recognition criteria, as described above, are met.

***Customer Deposit***

Customer deposit in the accompanying Consolidated Balance Sheets consists of payments received from customers in excess of their outstanding trade accounts receivable balances. These deposits will be offset against future testing receivables or refunded to the customers.

***Overhead Expenses***

The Company allocates overhead expenses, such as rent and utilities, to cost of revenue and operating expense categories based on headcount. As a result, an overhead expense allocation is reflected in cost of revenue and each operating expense category.

***Cost of Revenue***

Cost of revenue reflects the aggregate costs incurred in delivering test results and consists of: personnel costs, including salaries, employee benefit costs, bonuses and equity-based compensation expenses; costs of laboratory supplies; depreciation of laboratory equipment; amortization of leasehold and building improvements and allocated overhead. Costs associated with performing tests are recorded as tests are processed.

***Research and Development Expenses***

Research and development expenses represent costs incurred to develop the Company's technology and future tests. These costs consist of: personnel costs, including salaries, employee benefit costs, bonuses and equity-based compensation expenses; laboratory supplies; consulting costs and allocated overhead. The Company expenses all research and development costs in the periods in which they are incurred.

***Selling and Marketing Expenses***

Selling and marketing expenses consist of: personnel costs, including salaries, employee benefit costs, bonuses and equity-based compensation expenses; customer service expenses; direct marketing expenses; educational and promotional expenses; market research and analysis and allocated overhead. The Company expenses all selling and marketing costs as incurred.

***General and Administrative Expenses***

General and administrative expenses include executive, finance and accounting, legal and human resources functions. These expenses consist of: personnel costs, including salaries, employee benefit costs, bonuses and equity-based compensation expenses; audit and legal expenses; consulting costs and allocated overhead. The Company expenses all general and administrative expenses as incurred.

***Restructuring Costs***

Restructuring costs represent one-time employee termination benefits provided to employees associated with a newly acquired entity that were involuntarily terminated. A plan of termination was approved and authorized by management in the second quarter of 2022. The plan identified specific employees to be terminated and established terms of benefits those employees would receive upon termination. No additional costs are expected to be incurred under the plan of termination post 2022, and the payable balance is expected to be paid off by August 2023.

***Income Taxes***

Income taxes are accounted for under the asset and liability method. The Company provides for federal, state and foreign income taxes currently payable, as well as for taxes deferred due to timing differences between reporting income and expenses for financial statement purposes versus tax purposes. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted income tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect of a change in income tax rates is recognized as income or expense in the period that includes the enactment date.

The Company recognizes the effect of income tax positions only if those positions are more likely than not to be sustained. Recognized income tax positions are measured at the largest amount with a greater than 50% likelihood of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. For income tax positions where it is not more likely than not that a tax benefit will be sustained, the Company does not recognize a tax benefit in its consolidated financial statements. The Company records interest and penalties related to uncertain tax positions, if applicable, as a component of income tax expense.

***Equity-Based Compensation***

The Company grants various types of equity-based awards to its employees, consultants and non-employee directors. Equity-based compensation costs are reflected in the accompanying Consolidated Statements of Income based upon each award recipient’s role with the Company. The Company primarily grants to its employees restricted stock unit awards, or RSU awards, that generally vest over a specified period of time upon the satisfaction of service-based conditions. The Company measures compensation expense for equity-based awards granted to employees based on the fair value of the award on the grant date of the award. Compensation expense for employee RSU awards with a service-based vesting condition is recognized ratably over the vesting period of the award.

***Foreign Currency Translation and Foreign Currency Transactions***

The Company translates the assets and liabilities of its non-U.S. dollar functional currency subsidiaries into U.S. dollars using exchange rates in effect at the end of each period. Expenses for these subsidiaries are translated using rates that approximate those in effect during the period. Gains and losses from these translations are recognized in foreign currency translation gain (loss) included in the accompanying Consolidated Statements of Comprehensive Income. The Company and its subsidiaries that use the U.S. dollar as their functional currency remeasure monetary assets and liabilities at exchange rates in effect at the end of each period, and inventories, property and nonmonetary assets and liabilities at historical rates. Gains and losses from these measurements are included in interest and other income, net, in the accompanying Consolidated Statements of Income. Losses from foreign currency exchange were not significant in 2022, 2021 and 2020.

***Comprehensive Income (Loss)***

Comprehensive income (loss) is comprised of net income (loss) and other comprehensive income (loss). Other comprehensive income (loss) consists of net unrealized gain or loss on available-for-sale debt securities, net of tax, and foreign currency translation adjustments from its subsidiaries not using the U.S. dollar as their functional currency. Reclassifications from other comprehensive income (loss) to net earnings were not significant in 2022 or 2021. The Company did not have reclassifications from other comprehensive income (loss) to net loss in 2020. The tax effects related to net unrealized loss on available-for-sale debt securities were $7.2 million and $437,000 in 2022 and 2021, respectively. The tax effects related to net unrealized gain on the available-for-sale debt securities were $147,000 in 2020.

***Basic and Diluted Net Income or Loss per Share***

Basic net income or loss per common share is computed by dividing the net income or loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted net income or loss per common share is computed by dividing the net income or loss attributable to common stockholders by the weighted-average number of common shares and dilutive common share equivalents outstanding during the period.

***Disaggregation of Revenue***

The Company classifies its customers into three payor types: (i) Insurance, including claim reimbursement from HRSA for uninsured individuals, (ii) Institutional, including hospitals, medical institutions, other laboratories, governmental bodies, municipalities and large corporations, or (iii) Patients who pay directly, as the Company believes this best depicts how the nature, amount, timing, and uncertainty of its revenue and cash flows are affected by economic factors. The following table summarizes revenue from contracts with customers by payor type for the years ended December 31, 2022, 2021 and 2020.

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | | (in thousands) | |
| **Testing Services by payor** | | | |
| Insurance | $ 377,873 | $ 555,762 | $ 257,587 |
| Institutional | 239,961 | 435,688 | 163,083 |
| Patient | 1,134 | 1,134 | 1,042 |
| **Total Revenue** | $ 618,968 | $ 992,584 | $ 421,712 |

The insurance revenue category above includes $83.1 million and $310.4 million for the years ended December 31, 2022 and 2021, respectively, for services related to claims covered by the HRSA COVID-19 Uninsured Program.

There was no material variable consideration recognized in the current period that relates to performance obligations that were completed in the prior period.

Collection of the Company's net revenues from insurers is normally a function of providing complete and correct billing information within the various filing deadlines. Provided the Company has billed insurers accurately with complete information prior to the established filing deadline. If there has been a delay in billing, the Company determines if the amounts in question will likely go past the filing deadline, and if so, the Company will reserve accordingly for the billing.

***Contract Balances***

*Receivables from contracts with customers* - Receivables from contracts with customers are included within trade accounts receivable on the Consolidated Balance Sheets. Receivable from Insurance and Institutional customers represented 14% and 86%, respectively, as of December 31, 2022 and 47% and 53%, respectively, as of December 31, 2021.

*Contracts assets and liabilities* - Contract assets from contracts with customers associated with contract execution and certain costs to fulfill a contract are included in other current assets in the accompanying Consolidated Balance Sheets. Contract liabilities are recorded when the Company receives payment prior to completing its obligation to transfer goods or services to a customer. Contract liabilities are included in the Consolidated Balance Sheets. Revenues of $14.4 million, $26.4 million and $257,000 for the years ended December 31, 2022, 2021, and 2020, respectively, related to contract liabilities at the beginning of the respective periods were recognized.

***Transaction Price Allocated to Future Performance Obligations***

ASC 606, *Revenue from Contracts with Customers*, issued by the Financial Accounting Standards Board, or FASB, requires that the Company disclose the aggregate amount of transaction price that is allocated to performance obligations that have not yet been satisfied as December 31, 2022. ASC 606 provides certain practical expedients that limit the requirement to disclose the aggregate amount of transaction price allocated to unsatisfied performance obligations.

The Company applied the practical expedient to not disclose the amount of transaction price allocated to unsatisfied performance obligations when the performance obligation is part of a contract that has an original expected duration of one year or less. The Company does not have material future obligations associated with COVID 19, molecular diagnostic or genetic testing services that extend beyond one year.

**Recent Accounting Pronouncements**

The Company evaluates all ASUs issued by FASB for consideration of their applicability. ASUs not included in the Company's disclosures were assessed and determined to be either not applicable or are not expected to have a material impact on the Company's consolidated financial statements or disclosures.

**Note 3. Equity and Debt Securities**

The Company's equity and debt securities consisted of the following:

| | December 31, 2022 | | | |
|---|---|---|---|---|
| | Amortized Cost Basis | Unrealized Gains | Unrealized Losses | Aggregate Fair Value |
| | (in thousands) | | | |
| **Equity securities:** | | | | |
| Long-term | | | | |
| Preferred stock of privately held company | $ 15,000 | $ — | $ — | $ 15,000 |
| Total equity securities | 15,000 | — | — | 15,000 |
| **Available-for-sale debt securities** | | | | |
| Short-term | | | | |
| U.S. government debt securities | 189,333 | — | (3,373) | 185,960 |
| Corporate debt securities | 120,480 | — | (2,222) | 118,258 |
| U.S. treasury bills | 69,991 | — | (193) | 69,798 |
| U.S. agency debt securities | 68,411 | — | (342) | 68,069 |
| Money market accounts | 27,455 | — | — | 27,455 |
| Municipal bonds | 7,371 | — | (80) | 7,291 |
| Yankee debt securities | 2,347 | — | (5) | 2,342 |
| Less: Cash equivalents | (32,444) | — | — | (32,444) |
| Total debt securities due within 1 year | 452,944 | — | (6,215) | 446,729 |
| After 1 year through 5 years | | | | |
| U.S. government debt securities | 152,435 | 2 | (6,349) | 146,088 |
| U.S. agency debt securities | 92,054 | — | (3,435) | 88,619 |
| Corporate debt securities | 80,647 | — | (4,756) | 75,891 |
| Municipal bonds | 12,065 | — | (217) | 11,848 |
| Yankee debt securities | 753 | — | (85) | 668 |
| Redeemable preferred stock investment | 20,000 | — | (7,615) | 12,385 |
| Total debt securities due after 1 year through 5 years | 357,954 | 2 | (22,457) | 335,499 |
| After 5 years through 10 years | | | | |
| Municipal bonds | 3,617 | — | (83) | 3,534 |
| Total debt securities due after 5 years through 10 years | 3,617 | — | (83) | 3,534 |
| Total available-for-sale debt securities | 814,515 | 2 | (28,755) | 785,762 |
| Total equity and debt securities | $ 829,515 | $ 2 | $ (28,755) | $ 800,762 |

| | December 31, 2021 | | | |
|---|---|---|---|---|
| | Amortized Cost Basis | Unrealized Gains | Unrealized Losses | Aggregate Fair Value |
| | (in thousands) | | | |
| **Equity securities:** | | | | |
| Short-term | | | | |
| Bond funds | $ 99,314 | $ — | $ (515) | $ 98,799 |
| Exchange traded funds | 35,174 | — | (174) | 35,000 |
| Total equity securities | 134,488 | — | (689) | 133,799 |
| **Available-for-sale debt securities** | | | | |
| Short-term | | | | |
| Corporate debt securities | 92,116 | 24 | (148) | 91,992 |
| Money market accounts | 77,067 | — | — | 77,067 |
| U.S. government debt securities | 51,318 | — | (81) | 51,237 |
| Municipal bonds | 4,980 | — | (12) | 4,968 |
| Yankee debt securities | 3,615 | — | (6) | 3,609 |
| Less: Cash equivalents | (77,067) | — | — | (77,067) |
| Total debt securities due within 1 year | 152,029 | 24 | (247) | 151,806 |
| After 1 year through 5 years | | | | |
| Corporate debt securities | 242,421 | 29 | (1,913) | 240,537 |
| U.S. government debt securities | 147,699 | 7 | (786) | 146,920 |
| U.S. agency debt securities | 70,069 | — | (535) | 69,534 |
| Municipal bonds | 11,920 | 13 | (11) | 11,922 |
| Yankee debt securities | 8,633 | — | (89) | 8,544 |
| Total debt securities due after 1 year through 5 years | 480,742 | 49 | (3,334) | 477,457 |
| After 5 years through 10 years | | | | |
| Municipal bonds | 7,633 | — | (43) | 7,590 |
| Redeemable preferred stock investment | 20,000 | 1,965 | — | 21,965 |
| Total debt securities due after 5 years through 10 years | 27,633 | 1,965 | (43) | 29,555 |
| Total available-for-sale debt securities | 660,404 | 2,038 | (3,624) | 658,818 |
| Total equity and debt securities | $ 794,892 | $ 2,038 | $ (4,313) | $ 792,617 |

Gross unrealized losses on the Company's equity and debt securities were $28.8 million and $4.3 million as of December 31, 2022 and 2021, respectively. The Company did not recognize any credit losses for its available-for-sale debt securities in 2022 and 2021.

The Company's marketable securities of $472.8 million, managed by the custodian of the Company's marketable debt security investment account, of which the Company has an outstanding margin loan, is used as collateral for the margin account borrowing. See Note 8, *Debt, Commitments and Contingencies*, for more information on the margin loan.

**Note 4. Fair Value Measurements**

The authoritative guidance on fair value measurements establishes a framework with respect to measuring assets and liabilities at fair value on a recurring basis and non-recurring basis. Under the framework, fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants, as of the measurement date. The framework also establishes a three-tier hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs market participants would use in valuing the asset or liability and are developed based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the factors market participants would use in valuing the asset or liability and are developed based on the best information available in the circumstances. The hierarchy consists of the following three levels:

Level 1: Inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity can access at the measurement date.

Level 2: Inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3: Inputs are unobservable for the asset or liability.

The following tables present information about the Company's financial assets measured at fair value on a recurring basis, based on the three-tier fair value hierarchy:

| | December 31, 2022 | | | |
|---|---|---|---|---|
| | Total | Level 1 | Level 2 | Level 3 |
| | (in thousands) | | | |
| **Equity securities, debt securities and cash equivalents:** | | | | |
| U.S. government debt securities | $ 332,048 | $ — | $ 332,048 | $ — |
| Corporate debt securities | 194,149 | — | 194,149 | — |
| U.S. agency debt securities | 156,688 | — | 156,688 | — |
| U.S. treasury bills | 69,798 | 69,798 | — | — |
| Money market accounts | 27,455 | 27,455 | — | — |
| Municipal bonds | 22,673 | — | 22,673 | — |
| Preferred stock of privately held company | 15,000 | — | — | 15,000 |
| Redeemable preferred stock investment | 12,385 | — | — | 12,385 |
| Yankee debt securities | 3,010 | — | 3,010 | — |
| Total equity securities, debt securities and cash equivalents | $ 833,206 | $ 97,253 | $ 708,568 | $ 27,385 |

| | December 31, 2021 | | | |
|---|---|---|---|---|
| | Total | Level 1 | Level 2 | Level 3 |
| | (in thousands) | | | |
| **Equity securities, debt securities and cash equivalents:** | | | | |
| Corporate debt securities | $ 332,529 | $ — | $ 332,529 | $ — |
| U.S. government debt securities | 198,157 | — | 198,157 | — |
| Bond funds | 98,799 | 98,799 | — | — |
| U.S. agency debt securities | 69,534 | — | 69,534 | — |
| Exchange traded funds | 35,000 | 35,000 | — | — |
| Municipal bonds | 24,480 | — | 24,480 | — |
| Yankee debt securities | 12,153 | — | 12,153 | — |
| Redeemable preferred stock investment | 21,965 | — | — | 21,965 |
| Money market accounts | 77,067 | 77,067 | — | — |
| Total equity securities, debt securities and cash equivalents | $ 869,684 | $ 210,866 | $ 636,853 | $ 21,965 |

The Company's Level 1 assets include U.S. treasury bills, money market instruments, bond funds, and exchange traded funds and are valued based upon observable market prices. Level 2 assets consist of U.S. government and U.S. agency debt securities, municipal bonds, corporate debt securities and Yankee debt securities. Level 2 securities are valued based upon observable inputs that include reported trades, broker/dealer quotes, bids and offers. As of December 31, 2022, the Company had preferred stock of a privately held company, which was included in other long-term assets in the accompanying Consolidated Balance Sheets, and

redeemable preferred stock of a private company that were measured using unobservable (Level 3) inputs. The fair value of redeemable preferred stock as of December 31, 2022 and 2021 was based on valuation performed by a third-party valuation company utilizing the guideline public company method under market approach and the discounted cash flow method under income approach. For the value of the investment in private equity securities, the Company elected to measure it at cost minus impairment, as the preferred stock of the privately held company did not have a readily determinable fair value, and no impairment loss was recorded as of December 31, 2022.

There were no transfers between fair value measurement levels in 2022, 2021, and 2020.

**Note 5. Fixed Assets**

Major classes of fixed assets consisted of the following:

| | Useful Lives | December 31, 2022 | December 31, 2021 |
|---|---|---|---|
| | | (in thousands) | |
| Medical lab equipment | 5 months to 12 Years | $ 53,503 | $ 35,930 |
| Leasehold improvements | Shorter of lease term or estimated useful life | 11,804 | 4,003 |
| Computer software | 1 to 5 Years | 6,982 | 1,408 |
| Computer hardware | 1 to 5 Years | 6,979 | 5,661 |
| Building | 39 Years | 6,731 | 6,731 |
| Aircraft | 7 Years | 6,400 | 6,503 |
| Building improvements | 6 months to 39 Years | 5,865 | 3,936 |
| Furniture and fixtures | 1 to 5 Years | 4,248 | 2,255 |
| Land improvements | 5 to 15 Years | 904 | 403 |
| Automobile | 2 to 7 Years | 797 | 825 |
| General equipment | 3 to 5 Years | 44 | 44 |
| Land | | 7,500 | 7,500 |
| Assets not yet placed in service | | 12,877 | 6,718 |
| Total | | 124,634 | 81,917 |
| Less: Accumulated depreciation | | (43,281) | (19,630) |
| Fixed assets, net | | $ 81,353 | $ 62,287 |

Depreciation expense on fixed assets totaled $25.5 million, $9.3 million and $3.0 million for the years ended December 31, 2022, 2021 and 2020, respectively.

**Note 6. Other Significant Balance Sheet Accounts**

Other current assets consisted of the following:

| | December 31, 2022 | December 31, 2021 |
|---|---|---|
| | (in thousands) | |
| Other receivable | $ 19,836 | $ 1,403 |
| Prepaid income taxes | 15,434 | 1,716 |
| Prepaid expenses | 6,814 | 4,244 |
| Reagents and supplies | 4,280 | 12,206 |
| Marketable securities interest receivable | 2,525 | 2,743 |
| Contract assets | — | 237 |
| Total | $ 48,889 | $ 22,549 |

Other receivable as of December 31, 2022 includes $19.1 million of maturities of marketable securities that did not settle until after period-end.

Other current liabilities primarily includes $5.0 million payable pursuant to a share transfer agreement, see Note 15, *Business Combinations.*

Other long-term liabilities primarily includes operating and finance lease liabilities, long-term, see Note 9, *Leases*, and notes payable, long-term, See Note 8, *Debt, Commitments and Contingencies*.

**Note 7. Reporting Segment and Geographic Information**

The Company views its operations and manages its business in one reporting segment. All long-lived assets were located in the United States as of December 31, 2022 and 2021 with an insignificant amount located in China and Canada. Revenue by region for the years ended December 31, 2022, 2021 and 2020 were as follows:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | | (in thousands) | |
| **Revenue:** | | | |
| United States | $ 603,148 | $ 978,978 | $ 415,334 |
| Foreign | 15,820 | 13,606 | 6,378 |
| Total | $ 618,968 | $ 992,584 | $ 421,712 |

**Note 8. Debt, Commitments and Contingencies**

***Debt***

As of December 31, 2022, the Company had an outstanding borrowing of $15.0 million under its margin account with the custodian of the Company's marketable debt security investment account, Pershing Advisor Solutions, LLC, a BNY Mellon Company. The outstanding balance is included in the Consolidated Balance Sheets. Margin account borrowings were used for the purchase of real property located in El Monte, California in 2020. The securities in the brokerage account were used as collateral for the margin loan. The custodian can issue a margin call at any time. The interest rate on the margin loan was the effective federal funds rate, or EFFR, plus a spread. EFFR and/or the spread can be changed by BNY Mellon at any time. The interest was 1% at the time of withdrawal of $15.0 million from the margin account, and the interest rate at December 31, 2022 was 4.59%. The related interest expenses in 2022, 2021 and 2020 were $346,000, $117,000 and $20,000, respectively.

Notes payable as of December 31, 2022, consisted of $3.8 million of notes payable related to an installment sale contract the Company entered in February 2022 for a building and $5.2 million of notes payable to Xilong Scientific Co., or Xilong Scientific, by Fujian Fujun Gene Biotech Co., Ltd., or FF Gene Biotech. The notes payable related to the installment sale are due in February 2030, and the interest rate is 1.08%. The current portion and noncurrent portion are $461,000 and $3.4 million, respectively, and the noncurrent portion is included in the other long-term liabilities in the accompanying Consolidated Balance Sheets. The notes payable to Xilong Scientific is due on March 31, 2023, and the interest rate on the loan is 4.97%. The related interest expenses in 2022 and 2021 were $304,000 and $177,000, respectively. The Company did not have the installment sale contract in 2021.

***Operating and Finance Leases***

See Note 9, *Leases*, for further information.

***Purchase Obligations***

As of December 31, 2022, the Company had non-cancelable purchase obligations of $10.1 million, of which, $3.2 million for computer software and hardware, $2.5 million for reagents and other supplies, $1.1 million for services and $746,000 for medical lab equipment are payable within twelve months. $2.2 million for computer software and $381,000 for services are payable within the next thirty-six months.

***Contingencies***

From time to time, the Company may be subject to legal proceedings and claims arising in the ordinary course of business. Management does not believe that the outcome of any of these matters will have a material effect on the Company's consolidated financial position, results of operations or cash flows.

The Company has received a CID issued by the U.S. Department of Justice pursuant to the False Claims Act related to its investigation of allegations of medically unnecessary laboratory testing, improper billing for laboratory testing, and remuneration received or provided in violation of the Anti-Kickback Statute and the Stark Law. This CID requests information and records relating to certain of the Company's customers named in the CID, which represent a small portion of the Company's revenues. The Company is fully cooperating with the U.S. Department of Justice to promptly respond to the requests for information in this CID, and does not presently expect this CID or resulting investigation to have a material adverse impact. However, the Company cannot predict when the

investigation will be resolved, the outcome of the investigation or its potential impact, which may ultimately be greater than the Company currently expects.

**Note 9. Leases**

***Lessee***

The Company is party as a lessee to various non-cancelable operating leases with varying terms through March 2028 primarily for laboratory and office space and equipment. The Company has options to renew some of these leases after their expirations. On a lease-by-lease basis, the Company considers such options, which may be elected at the Company's sole discretion, in determining the lease term. The Company also has various finance leases for lab equipment with varying terms through December 2026, of which, some were acquired in business combinations. The Company does not have any leases with variable lease payments. The Company's operating lease agreements do not contain any residual value guarantees, material restrictive covenants, bargain purchase options or asset retirement obligations.

The Company's headquarters are located in Temple City, California, which is comprised of various corporate offices and a laboratory certified under the Clinical Laboratory Improvement Amendments of 1988, or CLIA, accredited by the College of American Pathologists, or CAP, and licensed by the State of California Department of Public Health. Other CLIA-certified laboratories are located in El Monte, California; Houston and Irving, Texas; Needham, Massachusetts; Phoenix, Arizona; Alpharetta, Georgia; and New York, New York.

The operating and finance lease right-of-use asset, short-term lease liabilities, and long-term lease liabilities as of December 31, 2022, and 2021 were as follows:

| | December 31, | |
|---|---|---|
| | 2022 | 2021 |
| | (in thousands) | |
| Operating lease ROU asset, net | $ 14,784 | $ 7,141 |
| Operating lease liabilities, short term | $ 6,132 | $ 1,842 |
| Operating lease liabilities, long term | $ 8,795 | $ 5,344 |
| Finance lease ROU asset, net | $ 2,784 | $ 1,735 |
| Finance lease liabilities, short term | $ 943 | $ 332 |
| Finance lease liabilities, long term | $ 1,818 | $ 1,398 |

The following was operating and finance lease expense:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | | (in thousands) | |
| Operating lease cost | $ 5,429 | $ 1,262 | $ 566 |
| Finance lease cost: | | | |
| Amortization of ROU assets | 683 | 7 | — |
| Interest on lease liabilities | 95 | 1 | — |
| Short-term lease cost | 1,528 | 296 | 142 |
| Total lease cost | $ 7,735 | $ 1,566 | $ 708 |

Supplemental information related to leases was the following:

| | December 31, 2022 |
|---|---|
| Weighted average remaining lease term - operating leases | 3.24 years |
| Weighted average discount rate - operating leases | 3.81% |
| Weighted average remaining lease term -finance leases | 3.10 years |
| Weighted average discount rate - finance leases | 3.98% |

The following is a maturity analysis of operating and finance lease liabilities using undiscounted cash flows on an annual basis with renewal periods included:

| | Operating Leases | Financing Leases |
|---|---|---|
| | (in thousands) | |
| Year Ending December 31, | | |
| 2023 | $ 6,590 | $ 986 |
| 2024 | 4,072 | 1,033 |
| 2025 | 2,118 | 547 |
| 2026 | 1,522 | 366 |
| 2027 | 1,360 | — |
| Thereafter | 217 | — |
| Total lease payments | 15,879 | 2,932 |
| Less imputed interest | (952) | (171) |
| Total | $ 14,927 | $ 2,761 |

***Lessor***

The Company leases out space in buildings it owns to third-party tenants under noncancelable operating leases. As of December 31, 2022, the remaining lease terms left range from 1 year to 2 years, including renewal options and may include rent escalation clauses. Lease income primarily represents fixed lease payments from tenants recognized on a straight-line basis over the application lease term. Variable lease income represents tenant payments for real estate taxes, insurance and maintenance.

The lease income was included in interest and other income, net, in the accompanying Consolidated Statements of Income. Total lease income was as follows:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | | (in thousands) | |
| Lease income | $ 269 | $ 413 | $ 144 |
| Variable lease income | 12 | 7 | 1 |
| Total lease income | $ 281 | $ 420 | $ 145 |

Future fixed lease payments from tenants for all noncancelable operating leases as of December 31, 2022 are as follows:

| | Lease Payments from Tenants |
|---|---|
| | (in thousands) |
| Year Ending December 31, | |
| 2023 | $ 181 |
| 2024 | 94 |
| Total | $ 275 |

**Note 10. Equity-Based Compensation**

The Company has included equity-based compensation expense as part of cost of revenue and operating expenses in the accompanying Consolidated Statements of Income as follows:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | | (in thousands) | |
| Cost of revenue | $ 8,704 | $ 3,563 | $ 1,452 |
| Research and development | 10,449 | 6,326 | 2,693 |
| Selling and marketing | 4,373 | 2,513 | 2,092 |
| General and administrative | 9,114 | 3,480 | 1,920 |
| Total | $ 32,640 | $ 15,882 | $ 8,157 |

The actual tax benefit realized from windfall tax deductions related to awards vested or exercised were $2.1 million, $13.3 million, and $2.7 million for the years ended December 31, 2022, 2021 and 2020, respectively.

***Award Activity***

*Option Awards*

The following table summarizes activity for options to acquire shares of the Company's common stock in the years ended December 31, 2022, 2021 and 2020:

| | Number of Shares Subject to Options (in thousands) | Weighted-Average Exercise Price | Weighted-Average Grant Date Fair Value | Weighted-Average Remaining Contractual Life (in years) | Aggregate Intrinsic Value (in thousands) (1) |
|---|---|---|---|---|---|
| Balance at December 31, 2019 | 341 | $ 1.27 | | 6.4 | $ 3,960 |
| Granted | 10 | $ 15.82 | $ 11.45 | | |
| Exercised | (56) | $ 1.86 | $ 5.04 | | |
| Canceled | (8) | $ 4.18 | $ 4.68 | | |
| Balance at December 31, 2020 | 287 | $ 1.59 | | 5.5 | $ 14,484 |
| Granted | 5 | $ 73.64 | $ 56.34 | | |
| Exercised | (76) | $ 1.13 | $ 8.40 | | |
| Canceled | — | $ — | $ — | | |
| Balance at December 31, 2021 | 216 | $ 3.42 | | 4.6 | $ 20,965 |
| Granted | 10 | $ 59.54 | $ 44.56 | | |
| Exercised | (5) | $ 7.16 | $ 7.41 | | |
| Canceled | (9) | $ 43.30 | $ 33.53 | | |
| Balance at December 31, 2022 | 212 | $ 4.21 | | 3.7 | $ 5,420 |
| Exercisable as of December 31, 2022 | 196 | $ 1.22 | | 3.3 | $ 5,608 |

(1) Aggregate intrinsic value is calculated as the difference between (i) the exercise price of options and (ii) the market value of the Company's common stock as of the applicable date.

The total fair value of options that vested during the years ended December 31, 2022, 2021 and 2020 was $126,000, $76,000 and $223,000, respectively. As of December 31, 2022, the remaining unrecognized compensation expense related to all outstanding option awards was $433,000 and is expected to be recognized over a weighted-average period of 3.4 years.

*RSU Awards*

RSUs are awards that entitle the holder to receive shares of the Company's common stock upon satisfaction of vesting conditions. Each RSU represents the contingent right to receive one share of the Company's common stock upon vesting and settlement.

The following table summarizes activity for RSUs relating to shares of the Company's common stock in the years ended December 31, 2022, 2021, and 2020:

| | Number of Shares (in thousands) | Weighted-Average Grant Date Fair Value |
|---|---|---|
| **Balance at December 31, 2019** | 1,511 | $ 6.54 |
| Granted | 1,389 | $ 24.86 |
| Vested and settled | (655) | $ 7.97 |
| Forfeited | (160) | $ 11.17 |
| **Balance at December 31, 2020** | 2,085 | $ 17.93 |
| Granted | 477 | $ 95.33 |
| Vested and settled | (836) | $ 15.43 |
| Forfeited | (107) | $ 37.83 |
| **Balance at December 31, 2021** | 1,619 | $ 40.74 |
| Granted | 1,895 | $ 49.98 |
| Vested and settled | (699) | $ 34.01 |
| Forfeited | (184) | $ 61.11 |
| **Balance at December 31, 2022** | 2,631 | $ 47.76 |

The RSU awards granted in the years ended December 31, 2022, 2021 and 2020 will result in aggregate equity-based compensation expense of $94.8 million, $45.5 million and $34.5 million, respectively, to be recognized over the vesting periods from the grant date of each award granted in the period. The RSU awards granted in the year ended December 31, 2022 included 663,013 shares of RSU awards assumed as part of the Fulgent Pharma acquisition, see more details in Note 14, *Related Party,* and Note 15, *Business Combinations*. As of December 31, 2022, the remaining unrecognized compensation expense related to all outstanding RSU awards was $110.6 million and is expected to be recognized over a weighted-average period of 3.0 years.

***Fair Value Assumptions for Option Awards***

The Company uses the Black-Scholes option-pricing model to measure the fair value of option awards. The Black-Scholes option-pricing model requires the input of various assumptions, each of which is subjective and requires significant judgment. These assumptions include the following:

- *Expected Term.* The expected term represents the period that the Company's equity-based awards are expected to be outstanding. The Company determines the expected term assumption based on the vesting terms, exercise terms and contractual terms of the options.
- *Risk-Free Interest Rate.* The Company determines the risk-free interest rate by using the equivalent to the expected term based on the U.S. Treasury yield curve in effect as of the date of grant.
- *Dividend Yield.* The assumed dividend yield is based on the Company's expectation that it will not pay dividends in the foreseeable future, which is consistent with its history of not paying dividends.
- *Expected Volatility.* The Company calculates expected volatility based on historical volatility data of its stock that is publicly traded.
- *Forfeiture Rate.* The Company accounts for forfeitures as they occur.

*Awards to Employees*

The table below sets forth the weighted-average assumptions used in the Black-Scholes option-pricing model to estimate the fair value of options to acquire shares of the Company's common stock granted to employees during the years ended December 31, 2022, 2021 and 2020.

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| Expected term (in years) | 6.1 | 6.1 | 6.1 |
| Risk-free interest rates | 2.6% | 1.1% | 0.4% |
| Dividend yield | — | — | — |
| Expected volatility | 88.7% | 94.6% | 87.5% |

***Determination of Fair Value on Grant Dates***

The fair value of the shares of the Company's common stock underlying option and RSU awards is determined by the Company's board of directors or the compensation committee thereof based on the closing sales price of the Company's common stock on the date of grant as reported by the Nasdaq Global Market.

**Note 11. Income Taxes**

Provision for income taxes consists of U.S. federal and state income taxes. A deferred tax liability is recognized for all taxable temporary differences, and a deferred tax asset is recognized for all deductible temporary differences, operating losses and tax credit carryforwards. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized.

The following table summarizes income (loss) before income taxes, equity loss in investee and gain (loss) on equity-method investments:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | (in thousands) | | |
| U.S. income before income taxes, equity loss in investee and gain (loss) on equity-method investments | $ 189,406 | $ 681,403 | $ 291,739 |
| Foreign loss before income taxes, equity loss in investee and gain (loss) on equity-method investments | (5,381) | (4,103) | (55) |
| Income before income taxes, equity loss in investee and gain (loss) on equity-method investments | $ 184,025 | $ 677,300 | $ 291,684 |

Income tax expense consisted of the following:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | (in thousands) | | |
| **Current:** | | | |
| Federal | $ 31,140 | $ 131,907 | $ 53,794 |
| State | 19,242 | 51,076 | 20,513 |
| **Total Current** | 50,382 | 182,983 | 74,307 |
| **Deferred:** | | | |
| Federal | (3,763) | (7,471) | (248) |
| State | (4,517) | (717) | (14) |
| Foreign | 224 | 669 | — |
| Change in valuation allowance | (224) | (669) | (1,513) |
| **Total Deferred** | (8,280) | (8,188) | (1,775) |
| Total income tax expense | $ 42,102 | $ 174,795 | $ 72,532 |

Reconciliation of the difference between the federal statutory income tax rate and the effective income tax rate is as follows:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| Tax provision at federal statutory rate | 21.00% | 21.00% | 21.00% |
| State taxes | 7.01% | 5.99% | 5.68% |
| Uncertain tax positions | 0.92% | 0.05% | 0.13% |
| Stock based compensation | -1.12% | -1.96% | -0.92% |
| Return to provision | -3.92% | -0.17% | -0.11% |
| Other permanent differences | 1.33% | 1.09% | 0.02% |
| Research & development credit | -2.98% | -0.33% | -0.40% |
| Other | 0.34% | 0.19% | -0.01% |
| Change in valuation allowance | 0.12% | -0.10% | -0.52% |
| Effective tax rate | 22.70% | 25.76% | 24.87% |

The following table summarizes the elements of the deferred tax assets (liabilities). Net deferred tax assets are included in other long-term assets in the Consolidated Balance Sheets.

| | As of December 31, | |
|---|---|---|
| | 2022 | 2021 |
| | (in thousands) | |
| **Deferred tax assets** | | |
| Accrued vacation and other accrued expenses | $ 1,488 | $ 1,486 |
| Provision for credit losses | 10,255 | 2,755 |
| Net operating losses | 16,345 | 199 |
| Stock based compensation | 2,550 | 1,739 |
| State income taxes | 4,892 | 10,991 |
| Excess tax basis in FF Gene Biotech net assets | 2,032 | — |
| Foreign | — | 1,808 |
| Lease liability | 4,086 | 1,643 |
| Unrealized gain/loss on available-for-sale debt securities | 7,664 | 437 |
| Section 174 research & experimental expenditures | 6,573 | — |
| Equity loss in investment | 503 | 700 |
| Other | 199 | 162 |
| Gross deferred tax assets | 56,587 | 21,920 |
| Less: Valuation allowance | (2,832) | (2,609) |
| **Net deferred tax assets** | 53,755 | 19,311 |
| **Deferred tax liabilities** | | |
| Intangible assets | 39,199 | 8,083 |
| Depreciation | 5,500 | 7,371 |
| Right of use asset | 4,056 | 1,640 |
| Other | 1,496 | 1,458 |
| Total deferred tax liabilities | 50,251 | 18,552 |
| **Net deferred tax assets** | $ 3,504 | $ 759 |

As of December 31, 2022, the Company has $58.8 million estimated federal net operating loss, or NOL, carryforwards and estimated state NOL carryforwards of $66.0 million. The Company's state NOLs are scheduled to begin expiring in 2037. The Company also has foreign NOL carryforwards of $13.8 million which are scheduled to expire from 2023 through 2027.

ASC 740-10-30-5 requires that deferred income tax assets be reduced by a valuation allowance if it is more likely than not that some or all of the deferred income tax assets will not be realized. The Company has evaluated the realizability of its deferred tax assets and has concluded that it is more likely than not that the Company may not realize the benefit of certain deferred tax assets. These deferred tax assets consist primarily of equity losses in joint ventures and foreign net operating loss carryforwards; accordingly, a valuation allowance of $2.8 million and $2.6 million has been recorded on these deferred tax assets as of December 31, 2022 and 2021. The increase in the valuation allowance of $224,000 for the years ended December 31, 2022 was primarily due to an increase in foreign deferred tax assets that are more likely than not to expire unrealized.

During 2020, the Company recorded a deferred tax asset related to the impairment of its investment in BostonMolecules, Inc. When realized, the asset will generate a capital loss which may only be used to offset capital gain income; therefore, the Company has recorded a full valuation allowance against this asset.

***Uncertain Tax Positions***

The Company is subject to income taxation by the United States government and certain states in which the Company's activities give rise to an income tax filing requirement. The Company does not have any significant income tax filing requirements in any foreign jurisdiction. As of December 31, 2022, there were no pending tax audits in any jurisdiction. The tax returns are subject to statutes of limitations that vary by jurisdiction. At December 31, 2022, the Company remains subject to income tax examinations in the U.S. and various states for tax years 2019 through 2022; certain other states remain subject to examination for tax years 2018 through 2022. However, due to the Company's NOL carryforwards in various jurisdictions, tax authorities have the ability to adjust carryforwards related to closed years until the statute expires on the year(s) in which the NOL carryforwards are utilized.

A reconciliation of the Company's gross unrecognized tax benefits is as follows:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | | (in thousands) | |
| Balance at beginning of year | $ 710 | $ 377 | $ — |
| Increases to prior year positions | 2,843 | — | 141 |
| Increases for current year positions | 6,189 | 333 | 236 |
| Balance at end of year | $ 9,742 | $ 710 | $ 377 |

As of December 31, 2022, the Company has $9.7 million of gross unrecognized tax benefits, of which, $2.3 million of unrecognized tax benefits would affect the effective tax rate if recognized. The Company has accrued $94,000 and $15,000 for interest at December 31, 2022 and 2021, respectively, and has recognized interest expense of $94,000 and $15,000 for the years ended December 31, 2022 and 2021, respectively. Although it is possible that the amount of unrecognized benefits with respect to our uncertain tax positions will increase or decrease in the next twelve months, the Company does not expect material changes.

While the Company believes it has adequately provided for all tax positions, amounts asserted by taxing authorities could differ from the Company's accrued positions. Accordingly, additional provisions on federal, state and foreign tax-related matters could be recorded in future periods as revised estimates are settled or otherwise resolved.

**Note 12. Income per Share**

The following is a reconciliation of the basic and diluted income per share computations:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | | (in thousands, except per share data) | |
| Net income attributable to Fulgent | $ 143,403 | $ 507,364 | $ 214,310 |
| Weighted-average common shares - outstanding, basic | 30,097 | 29,408 | 22,694 |
| Weighted-average common shares - outstanding, diluted | 30,964 | 30,976 | 24,056 |
| Net income per common share, basic | $ 4.76 | $ 17.25 | $ 9.44 |
| Net income per common share, diluted | $ 4.63 | $ 16.38 | $ 8.91 |

The following securities have been excluded from the calculation of diluted income per share because their effect would have been anti-dilutive:

| | Year Ended December 31, | | |
|---|---|---|---|
| | 2022 | 2021 | 2020 |
| | | (in thousands) | |
| Options | 10 | 5 | 10 |
| RSUs | 728 | 182 | 347 |

The anti-dilutive shares described above were calculated using the treasury stock method.

**Note 13. Retirement Plans**

The Company offers a 401(k) retirement savings plan, or the 401 (k) Plan, for its employees, including its executive officers, who satisfy certain eligibility requirements. The Internal Revenue Code of 1986, as amended, allows eligible employees to defer a portion of their compensation, within prescribed limits, on a pre-tax basis through contributions to the 401(k) Plan. The Company matches contributions to the 401(k) Plan based on the amount of salary deferral contributions the participant makes to the 401(k) Plan. The Company will match up to 3% of an employee’s compensation that the employee contributes to his or her 401(k) Plan account. Total Company matching contributions to the 401(k) Plan were $2.5 million, $697,000 and $422,000 in the years ended December 31, 2022, 2021 and 2020, respectively.

**Note 14. Related Party**

Linda Marsh, who is a member of the Company’s board of directors, is currently the Senior Executive Vice President of AHMC Healthcare Inc., or AHMC. The Company performs genetic testing and other testing services, on an arms-length basis, for AHMC, and the Company recognized $1.5 million, $3.4 million and $3.1 million in revenue in the years ended December 31, 2022, 2021 and

2020. As of December 31, 2022 and 2021, $93,000 and $556,000 was owed to the Company by AHMC, respectively, which is included in trade accounts receivable, net, in the accompanying Consolidated Balance Sheets, in connection with this relationship.

On November 7, 2022, the Company acquired Fulgent Pharma. See Note 15, *Business Combinations*. Prior to the acquisition, the Company and Fulgent Pharma LLC were parties to shared services arrangements where research and development, administrative services and office space and equipment are provided between the companies, on an arms-length basis. Until April 2022, Ming Hsieh was the manager and a member of Fulgent Pharma LLC. In April 2022, Fulgent Pharma LLC became a wholly-owned subsidiary of Fulgent Pharma which was 100% owned by Ming Hsieh, the Chief Executive Officer and Chairman of the Company's board of directors, and the Hsieh Family Dynasty Trust, dated January 27, 2010, or the Hsieh Trust, of which Mr. Hsieh is the grantor. Mr. Hsieh and Paul Kim, the Chief Financial Officer and Treasurer of Fulgent, also served as executive officers of Fulgent Pharma as its (i) President and Chief Executive Officer and (ii) Treasurer and Secretary, respectively. The cost of research and development services rendered by Fulgent Pharma LLC for the Company was not significant in 2022 prior to the acquisition. In the years ended December 31, 2021 and 2020, the research development service rendered by Fulgent Pharma LLC was $330,000 and $427,000, respectively. Costs allocated to Fulgent Pharma LLC were not significant in 2022 prior to the acquisition, 2021 and 2020. As of December 31, 2021, $679,000 was owed to Fulgent Pharma LLC by the Company, which is recorded in other current liabilities in the accompanying Consolidated Balance Sheet, in connection with these relationships. As part of the acquisition, RSUs to acquire shares of common stock of Fulgent Pharma held by Paul Kim, the Company's Chief Financial Officer, Jian Xie, the Company's President and Chief Operating Officer, Hanlin Gao, the Company's Chief Scientific Officer and other employees of the Company and consultants of Fulgent Pharma LLC were assumed by the Company and became RSUs to acquire 77,585, 129,309, 51,723, 117,398, and 286,998 shares of common stock of the Company, respectively.

Ming Hsieh, is the owner of PTJ Associates Inc., or PTJ. PTJ provides flight services to the Company on an arms-length basis. In the years ended December 31, 2022, 2021 and 2020, the Company incurred $235,000, $142,000 and $343,000, respectively, in expenses for flights between California and Texas to transport employees and supplies. As of December 31, 2022 and 2021, no amount was owed to PTJ by the Company.

Ming Hsieh is also on the board of directors and a 20% owner of ANP Technologies, Inc., or ANP, from which the Company purchased COVID-19 antigen rapid test kits and entered into certain drug-related licensing and development service agreements. The President and Chief Scientific Officer of Fulgent Pharma, Ray Yin, is the Founder, President, and Chief Technology Officer of ANP. In the year ended December 31, 2022, the Company incurred $1.2 million related to the purchase of COVID-19 antigen rapid tests kits and licensing and development services. No costs were incurred in the years ended December 31, 2021 and 2020. As of December 31, 2022, $607,000 was owed to ANP by the Company in connection with these relationships, and no amount was owed to ANP as of December 31, 2021.

**Note 15. Business Combinations**

***Inform Diagnostics***

On April 26, 2022, the Company completed the acquisition of 100% of the outstanding equity of Symphony Buyer, Inc., or Inform Diagnostics, a leading national independent pathology laboratory based in Irving, Texas. Under the terms of the Agreement and Plan of Merger, dated April 16, 2022, or the Inform Merger Agreement, the total purchase price payable to the securityholders of Symphony Buyer, Inc. was approximately $170 million, as adjusted for closing cash, closing indebtedness, closing working capital, closing transaction expenses and other transaction matters. With the addition of Inform Diagnostics, the Company will further expand the Company's genomic testing footprint and extend its test menu into breast pathology, gastrointestinal pathology, dermatopathology, urologic pathology, neuropathology, and hematopathology.

The financial results of Inform Diagnostics are included in the consolidated financial statements from the date of acquisition. The Company allocated the purchase price to tangible and identified intangible assets acquired and liabilities assumed based on estimated fair values. The following tables summarizes the consideration paid and the updated amounts of the assets acquired and liabilities assumed recognized at the acquisition date:

| | Amounts (in thousands) |
|---|---|
| Consideration | |
| Cash, net of cash received | $ 137,755 |
| | |
| **Recognized amounts of identifiable assets acquired and liabilities assumed** | |
| Net working capital | $ (15,024) |
| Fixed assets | 20,242 |
| ROU assets - operating | 12,653 |
| ROU assets - finance | 1,183 |
| Deferred tax assets | 3,410 |
| Other long-term assets | 4,711 |
| Identifiable intangible assets | 57,060 |
| Operating lease liabilities | (12,653) |
| Finance lease liabilities | (1,183) |
| Income tax payable | (40) |
| Other long-term liabilities | (4,449) |
| Recognized amounts of identifiable assets acquired and liabilities assumed, net | 65,910 |
| Goodwill | 71,845 |
| Total | $ 137,755 |

The goodwill of $71.8 million arising from the acquisition is attributed to the expected synergies, assembled workforce, other benefits that will be potentially generated from the combination and deferred tax. The goodwill recognized is not deductible for tax purposes.

The identified intangible assets acquired consisted of $54.0 million customer relationships with an estimated amortization life of 14 years, $2.7 million trade name with an estimated amortization life of 7 years, and $360,000 in-place lease intangible asset to be amortized over the remaining lease term of 5 years.

The fair value of the customer relationship was estimated using the Multiperiod Excess Earnings Method, or MPEEM, of the income approach. Under the MPEEM, an intangible asset's fair value is equal to the present value of the incremental after-tax cash flows attributable only to the subject intangible asset after deducting contributory asset charges. The incremental after-tax cash flows attributable to the customer relationships are then discounted to their present value at a risk-adjusted rate of return. The fair value of the trade name was estimated using the relief from royalty, or RFR, method. The RFR method estimates the portion of the Company's earnings attributable to an intangible asset based on the royalty rate the Company would have paid for the use of the asset if it did not own it. The fair value of in-place lease intangible asset was estimated using the discounted cash flow under the income approach. The useful lives of the intangible assets for amortization purposes were determined by considering the period of expected cash flows used to measure the fair values of the intangible assets adjusted as appropriate for entity-specific factors including legal, regulatory, contractual, competitive, economic and other factors that may limit the useful life. The customer relationships and trade name are amortized on a straight-line basis over their estimated useful lives.

Revenue and operating loss from the Inform Diagnostics acquisition since the acquisition date are $83.6 million and $17.0 million, respectively, which are included in the accompanying Consolidated Statements of Income.

The transaction costs associated with the acquisition of Inform Diagnostics consisted primarily of legal, regulatory and financial advisory fees of approximately $6.6 million for the year ended December 31, 2022, respectively. These transaction costs were expensed as incurred as general and administrative expense in the respective period.

**Unaudited Pro Forma Financial Information**

The following unaudited pro forma financial information summarizes the combined results of operations of Fulgent and Inform Diagnostics as if the companies had been combined as of the beginning of 2021. The pro forma financial information has been adjusted for the following:

*Acquisition-related costs* - Acquisition-related costs incurred by both Fulgent and Inform Diagnostics were excluded from the net income attributable to Fulgent, and total costs were $9.6 million for the year ended December 31, 2022.

Other adjustments to the net income attributable to Fulgent were $772,000 and $2.3 million for the year ended December 31, 2022 and 2021, respectively. Other adjustments to revenue were $962,000 and $3.9 million for or the year ended December 31, 2022 and 2021, respectively.

| | Year Ended December 31, | |
|---|---|---|
| | 2022 | 2021 |
| | (in thousands) | |
| Revenue | $ 659,386 | $ 1,140,184 |
| Net income attributable to Fulgent | $ 140,288 | $ 493,313 |
| Basic earnings per common share attributable to Fulgent | $ 4.66 | $ 16.77 |
| Diluted earnings per common share attributable to Fulgent | $ 4.53 | $ 15.93 |

***Fulgent Pharma Holdings, Inc***

On November 7, 2022, the Company completed the acquisition of 100% of the outstanding equity of Fulgent Pharma, a clinical-stage, therapeutics development company focused on perfecting drug candidates for treating a broad range of cancers. Under the terms of the Agreement and Plan of Merger, dated November 7, 2022, or the Pharma Merger Agreement, the total merger consideration was paid in a combination of cash, the Company's common stock, or the Stock Consideration, and assumed restricted stock units, or RSUs, subject to customary adjustments for closing cash, closing indebtedness, transaction expenses and other transaction matters. A portion of the Stock Consideration was held back for a duration of time after the closing of the transaction to satisfy certain indemnification obligations of the Pharma Stockholders as described in the Pharma Merger Agreement. The RSUs are subject to vesting over the four-year period immediately following the date of their original grant, subject to the holder’s continuing service. The integrated companies plan to offer a vertically integrated solution to combat cancer with the potential to unlock significant long-term upsides for both the therapeutic and diagnostic businesses, while effectively managing risk.

The financial results of Pharma are included in the consolidated financial statements from the date of acquisition. The Company allocated the purchase price to tangible and identified intangible assets acquired and liabilities assumed based on estimated fair values. The following tables summarizes the consideration paid and the updated amounts of the assets acquired and liabilities assumed recognized at the acquisition date:

| | Amounts |
|---|---|
| | (in thousands) |
| Considerations | |
| Cash, net of cash received | $ 39,924 |
| Stock | 28,111 |
| Total considerations | $ 68,035 |
| | |
| **Recognized amounts of identifiable assets acquired and liabilities assumed** | |
| Debt-free net working capital | $ (3,679) |
| Restricted cash | 5,000 |
| Fixed assets | 1,310 |
| Identifiable intangible assets | 64,590 |
| Deferred tax liabilities | (16,172) |
| Long-term or non-operating liabilities | (5,069) |
| Recognized amounts of identifiable assets acquired and liabilities assumed, net | 45,980 |
| Goodwill | 22,055 |
| Total | $ 68,035 |

The goodwill of $22.1 million arising from the acquisition is attributed to Fulgent Pharma's rights to intellectual property, expected synergies, assembled workforce, and other benefits that will potentially be generated from the combination and deferred tax. The goodwill recognized is not deductible for tax purposes.

The identified intangible assets acquired consisted of $64.6 million in IPR&D. Fulgent Pharma has developed a novel nanoencapsulation and targeted therapy platform, which is designed to improve the therapeutic window and pharmacokinetic profile of new and existing cancer drugs. The lead drug candidate, FID-007, has achieved proof-of-concept in preliminary human clinical trials for the treatment of various cancer types, including head and neck, ampullary, pancreatic, non-small cell lung cancer, and breast. The fair value of the IPR&D was estimated using MPEEM. The method involves forecasting after-tax operating income from existing clients, subtracting the portions attributable to a contributory asset, and discounting the remaining earnings to present value. The useful life of IPR&D is indefinite.

Revenue and operating loss from the Fulgent Pharma acquisition since the acquisition date are zero and $816,000, respectively, which are included in the accompanying Consolidated Statements of Income.

The transaction costs associated with the acquisition of Pharma consisted primarily of legal, regulatory and financial advisory fees of approximately $1.4 million for the year ended December 31, 2022. These transaction costs were expensed as incurred as general and administrative expense in the respective period.

The $5.0 million restricted cash received represents cash consideration payable pursuant to the share transfer agreement Fulgent Pharma entered prior to Fulgent Pharma acquisition date. The cash consideration was not paid as of Fulgent Pharma acquisition date and was included in noncurrent or non-operating liabilities in above table.

**Note 16. Stock Repurchase Program**

In March 2022, the Company's Board authorized a $250.0 million stock repurchase program. Under the stock repurchase program, the Company may repurchase shares from time to time in the open market or in privately negotiated transactions. The stock repurchase program has no expiration from the date of authorization. During the year ended December 31, 2022, the Company repurchased 1.8 million shares of its common stock at an aggregate cost of $74.3 million under the stock repurchase program. As of December 31, 2022, a total of approximately $175.7 million remained available for future repurchases of its common stock under the stock repurchase program.

**Note 17. Goodwill and Intangible Assets**

Summaries of goodwill and intangible assets balances as of December 31, 2022 and 2021 were as follows:

| | Weighted-Average Amortization Period | December 31, 2022 | December 31, 2021 |
|---|---|---|---|
| | | (in thousands) | |
| Goodwill | | $ 143,027 | $ 50,897 |
| In-process research & development | n/a | $ 64,590 | $ — |
| Royalty-free technology | 10 Years | 5,364 | 5,803 |
| Less: accumulated amortization | | (894) | (387) |
| Royalty-free technology, net | | 4,470 | 5,416 |
| Customer relationships | 13 Years | 82,750 | 28,845 |
| Less: accumulated amortization | | (6,215) | (1,125) |
| Customer relationships, net | | 76,535 | 27,720 |
| Trade name | 8 Years | 3,790 | 1,090 |
| Less: accumulated amortization | | (412) | (45) |
| Trade name, net | | 3,378 | 1,045 |
| In-place lease intangible assets | 5 Years | 360 | — |
| Less: accumulated amortization | | (46) | — |
| In-place lease intangible assets, net | | 314 | — |
| Laboratory information system platform | 5 Years | 1,860 | 1,860 |
| Less: accumulated amortization | | (527) | (155) |
| Laboratory information system platform, net | | 1,333 | 1,705 |
| Purchased patent | 10 Years | 29 | 31 |
| Less: accumulated amortization | | (6) | (3) |
| Purchased patent, net | | 23 | 28 |
| Total intangible assets, net | | $ 150,643 | $ 35,914 |

Acquisition-related intangibles included in the above tables are generally finite-lived and are carried at cost less accumulated amortization, except for IPR&D, which is related to our 2022 acquisition of Fulgent Pharma and has an indefinite life until research

and development efforts are completed or abandoned. All other finite-lived acquisition-related intangibles related to the business combinations in 2022 and 2021 are amortized on a straight-line basis over their estimated lives, which approximates the pattern in which the economic benefits of the intangible assets are expected to be realized.

Changes in the carrying amount of goodwill for the year ended December 31, 2022 and 2021 are as follows:

| | 2022 | 2021 |
|---|---|---|
| | (in thousands) | |
| Balance as of January 1, | | |
| Goodwill | $ 50,897 | $ — |
| Accumulated impairment losses | — | — |
| | 50,897 | — |
| Goodwill acquired during year | | |
| Inform Diagnostics | 71,845 | — |
| Fulgent Pharma | 22,055 | — |
| CSI | — | 27,484 |
| FF Gene Biotech | — | 23,082 |
| | 93,900 | 50,566 |
| | | |
| Net exchange differences | | |
| FF Gene Biotech | (1,770) | 331 |
| | | |
| Balance as of December 31, | | |
| Goodwill | 143,027 | 50,897 |
| Accumulated impairment losses | — | — |
| | $ 143,027 | $ 50,897 |

Based on the carrying value of intangible assets recorded as of December 31, 2022, and assuming no subsequent impairment of the underlying assets, the annual amortization expense for intangible assets is expected to be as follows:

| | Amounts |
|---|---|
| | (in thousands) |
| 2023 | $ 7,864 |
| 2024 | 7,864 |
| 2025 | 7,864 |
| 2026 | 7,554 |
| 2027 | 7,225 |
| Thereafter | 47,682 |
| Total | $ 86,053 |

**Note 18. Selected Quarterly Financial Data (Unaudited)**

The tables below set forth the Company's quarterly Consolidated Statements of Income data for the eight quarters ended December 31, 2022. In the opinion of management, this quarterly data has been prepared on the same basis as the accompanying consolidated financial statements and includes all adjustments, consisting of normal recurring adjustments, necessary for a fair presentation of the results of operations for the periods presented. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations," in the report in which these consolidated financial statements are included for descriptions of the effects of any extraordinary, unusual or infrequently occurring items recognized in any of the periods covered by this data. The results for any one quarter are not indicative of the results to be expected in the current period or any future period.

| | Three Months Ended | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Dec. 31, 2022 | Sept. 30, 2022 | June 30, 2022 | Mar. 31, 2022 | Dec. 31, 2021 | Sept. 30, 2021 | June 30, 2021 | Mar. 31, 2021 |
| | (dollars in thousands, except per share data) | | | | | | | |
| **Statement of Operations Data:** | | | | | | | | |
| Revenue | $ 67,704 | $ 105,655 | $ 125,341 | $ 320,268 | $ 251,671 | $ 227,868 | $ 153,616 | $ 359,429 |
| Cost of revenue | 54,717 | 59,560 | 60,065 | 77,725 | 62,134 | 43,466 | 35,858 | 74,075 |
| Gross profit | 12,987 | 46,095 | 65,276 | 242,543 | 189,537 | 184,402 | 117,758 | 285,354 |
| Operating expenses: | | | | | | | | |
| Research and development | 8,509 | 7,507 | 6,905 | 5,989 | 7,464 | 6,021 | 5,312 | 5,422 |
| Selling and marketing | 10,253 | 9,859 | 10,866 | 7,940 | 8,200 | 6,012 | 5,219 | 5,008 |
| General and administrative | 28,793 | 26,266 | 30,240 | 25,775 | 22,102 | 12,299 | 8,329 | 8,002 |
| Amortization of intangible assets | 2,010 | 2,006 | 1,575 | 906 | 911 | 797 | — | — |
| Restructuring costs | (26) | 105 | 2,896 | — | — | — | — | — |
| Total operating expenses | 49,539 | 45,743 | 52,482 | 40,610 | 38,677 | 25,129 | 18,860 | 18,432 |
| Operating (loss) income | (36,552) | 352 | 12,794 | 201,933 | 150,860 | 159,273 | 98,898 | 266,922 |
| Interest and other income (expense), net | 3,090 | 1,405 | 958 | 45 | (35) | 496 | 604 | 282 |
| (Loss) income before income taxes and gain on equity method investment | (33,462) | 1,757 | 13,752 | 201,978 | 150,825 | 159,769 | 99,502 | 267,204 |
| (Benefit from) provision for income taxes | (9,386) | 414 | 2,653 | 48,421 | 47,148 | 37,545 | 23,589 | 66,513 |
| (Loss) income before gain on equity method investment | (24,076) | 1,343 | 11,099 | 153,557 | 103,677 | 122,224 | 75,913 | 200,691 |
| Gain on equity method investment | — | — | — | — | — | — | 3,734 | — |
| Net (loss) income from consolidated operations | (24,076) | 1,343 | 11,099 | 153,557 | 103,677 | 122,224 | 79,647 | 200,691 |
| Net loss attributable to noncontrolling interests | 244 | 376 | 438 | 422 | 662 | 298 | 165 | — |
| Net (loss) income attributable to Fulgent | $ (23,832) | $ 1,719 | $ 11,537 | $ 153,979 | $ 104,339 | $ 122,522 | $ 79,812 | $ 200,691 |
| | | | | | | | | |
| Net (loss) income per common share attributable to Fulgent: | | | | | | | | |
| Basic | $ (0.80) | $ 0.06 | $ 0.38 | $ 5.09 | $ 3.48 | $ 4.13 | $ 2.74 | $ 6.96 |
| Diluted | $ (0.80) | $ 0.06 | $ 0.37 | $ 4.93 | $ 3.34 | $ 3.93 | $ 2.59 | $ 6.52 |

**Note 19. Subsequent Event**

As of February 27, 2023, no subsequent events are being reported.

# DESCRIPTION OF FULGENT GENETICS, INC.'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

As of December 31, 2019, Fulgent Genetics, Inc. had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended, or the Exchange Act: common stock, $0.0001 par value per share, or Common Stock.

Unless the context otherwise requires, all references to "we" or "us" in this Exhibit 4.3 refer to Fulgent Genetics, Inc.

## DESCRIPTION OF CAPITAL STOCK

The following summary description of our capital stock is based on the provisions of our Certificate of Incorporation, as amended, or the Certificate, as well as our Bylaws, and the applicable provisions of the Delaware General Corporation Law, or the DGCL. The following description is only a summary and it may not contain all the information that is important to you. This information is qualified entirely by reference to the applicable provisions of our Certificate and Bylaws, which are exhibits to this report, and the DGCL.

As of the date of this report, our certificate of incorporation authorizes us to issue 50,000,000 shares of common stock, par value $0.0001 per share, and 1,000,000 shares of preferred stock, par value $0.0001 per share.

### Common Stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of our stockholders. The holders of our common stock do not have any cumulative voting rights. Because of this absence of cumulative voting, the holders of a majority of the shares of common stock entitled to vote in any election of directors have the power to elect all of the directors standing for election, if they should so choose. Holders of our common stock are entitled to receive ratably any dividends that may be declared by our board of directors from time to time out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions. In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock. All of the outstanding shares of our common stock, as well as any shares of common stock issuable upon the conversion of any securities convertible into our common stock, are (or will be upon issuance) fully paid and non-assessable.

### Blank Check Preferred Stock

Our board of directors is authorized, subject to the limitations imposed by Delaware law, to issue up to 1,000,000 shares of preferred stock, par value $0.0001 per share, in one or more series, without stockholder approval. Our board of directors may fix the rights, preferences, privileges and restrictions of our authorized shares of preferred stock in one or more series and authorize their issuance without the approval of our stockholders. These rights, preferences, privileges and restrictions could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms 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 common stock. The issuance of our preferred stock could adversely affect the voting power of holders of our common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control of our company or other corporate action. As of the date of the filing of this report, no shares of preferred stock will be outstanding.

### Antitakeover Provisions

Certain provisions of Delaware law, our Certificate and/or our Bylaws may have the effect of delaying, deferring or discouraging another person from acquiring control of our company, as described below.

***Section 203 of the DGCL***

We are subject to Section 203 of the DGCL, 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, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (i) persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder

In general, Section 203 defines a “business combination” to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;

- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;

- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder

- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or

- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an “interested stockholder” as an entity or person who, together with the person’s affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

**Certificate of Incorporation and Bylaws**

Our Certificate and Bylaws include a number of provisions that may discourage or delay attempts to take over our company or effect change to our management. These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. We believe the benefits of these provisions, including

increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals.

***No Cumulative Voting Rights***

Because our Certificate does not provide for cumulative voting rights, stockholders holding a majority of our outstanding voting power will be able to elect all of our directors.

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***Removal of Directors; Number of Directors; Vacancies***

Our Bylaws provide that directors may be removed by our stockholders upon the vote of a majority of our outstanding common stock, voting together as a single class, and subject to any rights of holders of any series of preferred stock that we may issue in the future, and that any such removal may be made with or without cause. Further, subject to any rights of holders of any series of preferred stock that we may issue in the future, the authorized number of directors may be changed only by the board of directors. Vacancies and newly created directorships on the board of directors may, except as otherwise required by law or determined by the board of directors, only be filled by a majority vote of the directors then serving on the board of directors, even though less than a quorum. These provisions will make it difficult for stockholders to remove directors and will prevent a stockholder from increasing the size of our board of directors and gaining control of our board of directors by filling the resulting vacancies with its own nominees.

***Stockholder Actions; Special Meetings of Stockholders***

Our Certificate and Bylaws provide that all stockholder actions must be effected at a duly called meeting of stockholders, thereby eliminating the right of stockholders to act by written consent without a meeting. Our Bylaws also provide that special meetings of stockholders may only be called by the Chairman of our board of directors, our President or our board of directors.

***Advance Notice Requirements for Stockholder Proposals and Director Nominations***

Our Bylaws provide advance notice procedures that must be followed by stockholders seeking to bring business before an annual meeting of our stockholders or to nominate candidates for election as directors at any meeting of our stockholders, which will require any such notice to be delivered to us at a specified time and in a specified form and contain certain specified information. These provisions may preclude our stockholders from bringing matters before our meetings of stockholders or from making nominations for directors at our meetings of stockholders if they do not comply with these requirements.

***Issuance of Undesignated Preferred Stock***

The existence of authorized but unissued shares of preferred stock enables our board of directors to render more difficult or to discourage an attempt to obtain control of our company by means of a merger, tender offer, proxy contest or otherwise.

**Limitations on Liability and Indemnification Matters**

Our Certificate contains provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by the DGCL. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director’s duty of loyalty to us or our stockholders;

- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;

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- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the DGCL; or

- any transaction from which the director derived an improper personal benefit.

Additionally, our Certificate and Bylaws require us to indemnify our directors and officers to the maximum extent permitted by the DGCL and allow us to indemnify other employees and agents as set forth in the DGCL. These documents further provide that we shall pay expenses (including attorneys' fees) incurred by an director or officer in defending any civil, criminal, administrative or investigative action, suit or proceeding for which such director or officer may be entitled to indemnification in advance of the final disposition of such action, suit or proceeding, upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that he or she is not entitled to be indemnified by us.

We have entered separate indemnification agreements with each of our directors which provide these individuals with indemnification in addition to the indemnification provided for in our certificate of incorporation and bylaws. These agreements, among other things, require us to indemnify our directors and officers for certain expenses, including attorneys' fees, judgments, penalties, fines and settlement amounts actually and reasonably incurred by such director and officer in any action or proceeding arising out of his or her service to us or any of our subsidiaries or any other company or enterprise to which the individual provides services at our request. Subject to certain limitations, these indemnification agreements also require us to advance expenses incurred by our directors and officers for the defense of any action for which indemnification is required or permitted.

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The limitation of liability and indemnification provisions in our Certificate, Bylaws and indemnification agreements may discourage stockholders from bringing a lawsuit against our directors and officers 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.

**Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent's address is 250 Royall Street, Canton, Massachusetts 02021 and its telephone number is 1(800) 662-7232.

**Listing on the Nasdaq Global Market**

Our common stock is listed on the Nasdaq Global Market under the symbol "FLGT."

**Exhibit 10.46**

# Rule 10b5-1 Issuer Repurchase Plan

This Rule 10b5-1 Issuer Repurchase Plan (this "**Plan**") is entered into this 15th day of December, 2022 between Fulgent Genetics, Inc. (**"Company"**) and Piper Sandler & Co. (**"Broker"**)**.**

## Recitals

Whereas, Company desires to establish this Plan to systematically repurchase shares of its common stock, **par value $0.0001 per share** (the **"Shares"**) in accordance with this Plan and the safe harbor provided by Rule 10b5-1 of the Securities Exchange Act of 1934, as amended (the **"Exchange Act"**).

Whereas, Company desires to engage Broker to effect repurchases of shares of the Stock in accordance with this Plan and Rule 10b5-1.

Whereas, Company desires that all Plan Transactions to be executed under this Plan be executed in accordance with the safe harbor set forth in Rule 10b-18.

## Agreement

Therefore, Company and Broker hereby agree as follows:

1. Subject to the Instructions set forth on Attachment A (the **"Instructions"*)*** and ordinary principles of best execution, Company grants to Broker time and price discretion with respect to the Plan Transactions, and Broker shall use its reasonable efforts to effect transactions in the Stock (each, a **"Plan Transaction"**) pursuant to the Instructions.

2. Company understands that if Broker is not able to effect part or all of a Plan Transaction due to a market disruption or a legal, regulatory, or contractual restriction applicable to Broker or Company, then any contemplated Plan Transaction shall not be executed pursuant to this Plan or alternatively, at the discretion of Broker, shall be executed in whole or in part as promptly and practically as possible after cessation or termination of any such market disruption or legal, regulatory or contractual restriction, taking into consideration ordinary principles of best execution; provided however, that in no event shall any Plan Transaction be executed after the Termination Date.

3. Company represents and warrants that:

(a) the purchase of the Shares pursuant to this Plan has been duly authorized by Company and is consistent with Company's publicly announced repurchase program for the Shares;

(b) neither the Plan nor the contemplated Plan Transactions is prohibited or restricted by any legal, regulatory or contractual restriction or undertaking binding upon Company;

(c) to its knowledge, neither the Plan nor any of the contemplated Plan Transactions is prohibited or restricted by any legal, regulatory or contractual restriction or undertaking binding upon Broker;

(d) it is not currently aware of any material nonpublic information with respect to the Company or any securities of the Company (including the Shares); and

(e) it is entering into this Plan in good faith and not as part of a plan or scheme to evade the prohibitions of Section 10(b) of the Exchange Act or Rule 10b-5, and is its intent that the Plan and all Plan Transactions comply with the requirements of the safe harbor of Rule 10b5-1.

4. Company undertakes to immediately notify Broker if:

(a) the purchase of the Shares pursuant to this Plan is no longer duly authorized by Company or is otherwise inconsistent with Company's publicly announced repurchase program for the Shares;

(b) it becomes subject to any legal, regulatory, or contractual restriction or undertaking that would prevent it from maintaining this Plan or having Broker execute Plan Transactions under this Plan; or

(c) it becomes aware of any legal, regulatory, or contractual restriction or undertaking that would prevent Broker from executing Plan Transactions under this Plan.

5. In the event that Company becomes (i) subject to any legal, regulatory, or contractual restriction or undertaking that would prevent it from maintaining this Plan or having Broker execute Plan Transactions under this Plan (pursuant to Section 4(b) above), or (ii) aware of any legal, regulatory, or contractual restriction or undertaking that would prevent Broker from executing Plan Transactions under this Plan (pursuant to Section 4(c) above), then in either case, Company and Broker shall use their reasonable efforts to suspend, amend or terminate this Plan to take account any such restriction or undertaking (but neither party shall be obligated to take any action that would be inconsistent with the safe harbor set forth in Rule 10b5-1.

6. In the event of the occurrence of any of the circumstances described in Section 4, the Company may suspend further Plan Transactions at such times and for such periods as may be advisable to ensure compliance with any applicable legal, regulatory or contractual restrictions or undertakings. In such event, the chief executive officer, chief financial officer, or general counsel of the Company shall promptly communicate in writing the details of such suspension to Broker and such communication shall contain an acknowledgement by Company that such suspension is being made pursuant to the requirements of Rule 10b5-1.

7. It is the parties' intent that this Plan and all Plan Transactions comply with the requirements of the safe harbor set forth in Rule 10b5-1. Any provision of this Plan that cannot be construed in accordance with Rule 10b5-1 shall be void.

8. It is the parties' intent that all Plan Transactions be executed in accordance with the safe harbor set forth in Rule 10b-18. Broker undertakes to execute all Plan Transactions in accordance with the Rule 10b-18 safe harbor and Company undertakes not to take any action which would cause any Plan Transaction to fall outside the Rule 10b-18 safe harbor. Each party undertakes to promptly notify the other party in the event either party learns of any Plan Transaction that has been executed outside the Rule 10b-18 safe harbor. Any Plan Transaction executed outside the

Rule 10b-18 safe harbor shall be voidable at the election of Company, with any resulting costs borne by the party at fault.

9. Broker agrees not to use any information contained in this Plan in connection with its purchases or sales of, or trading in, the Shares or any other securities of Company (including any derivative securities), or to provide third persons with such information or recommend that such third persons buy or sell securities based upon such information.

10. All Share numbers and dollar amounts set forth in this Plan shall automatically be adjusted to reflect stock splits, stock dividends, and similar events occurring after the date hereof.

11. This Plan may be amended only by a writing executed by Company and Broker. Any such writing shall contain Company's representation that it is not aware of material nonpublic information regarding Company, its Shares, or any of its securities (including any derivative securities) as of the date thereof.

12. Notwithstanding anything contained herein, after consultation with its counsel, Company may terminate this Plan at any time prior to the Termination Date by providing written notice of termination prior thereto.

**[Remainder of Page Intentionally Left Blank – Signature Page Follows]**

IN WITNESS WHEREOF, the undersigned have signed this Plan as of the date first written above.

**Fulgent Genetics, Inc.**

By: /s/ Paul Kim
Its: CFO

PIPER SANDLER & CO.

By: /s/ Mark Cieciura
Its: Managing Director

# SECOND AMENDMENT TO LEASE AGREEMENT

**THIS SECOND AMENDMENT TO LEASE AGREEMENT** (this **"Second Amendment")** dated and effective for reference purposes as of July 1, 2020, is made by and between **WPT LAND 2 LP,** a Delaware limited partnership **("Landlord),** and **INFORM DIAGNOSTICS, INC.,** a Delaware corporation **("Tenant).**

## BACKGROUND:

A. Landlord (as successor in interest to Liberty Property Limited Partnership, successor in interest to Liberty Cotton Center, LLC, successor in interest to and Dared 81 LLC) and Tenant (formerly known as Miraca Life Sciences, Inc., which was formerly known as Caris Diagnostics, Inc.) are parties to that certain Industrial Real Estate Lease dated October 25, 2006, as amended by that certain Amendment to Lease Agreement dated August 18, 2009 (the **"First Amendment)** (as amended, the **"Lease),** covering certain premises containing approximately 24,900 rentable square feet of space (the **"Premises"),** being the entire building known as and located at Building 10, 4207 E. Cotton Center Boulevard, Phoenix, Arizona (the **"Building),** as more fully described in the Lease.

B. Tenant desires to extend the Term and modify other sections of the Lease, and Landlord has agreed to such extension and modifications, subject to the provisions of this Second Amendment. Accordingly, Landlord and Tenant desire to amend the Lease.

**NOW, THEREFORE,** the parties hereto, in consideration of the mutual promises and covenants contained herein and in the Lease, and intending to be legally bound, hereby agree that the Lease is amended as follows:

1. **Incorporation.** The above Background is incorporated herein by reference.

2. **Defined Terms; Conflict.** All capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to them in the Lease. In the event there is a conflict between the terms of the Lease and this Second Amendment, this Second Amendment shall control.

3. **Term.** The Lease is hereby amended to extend the Lease Term for one (1) additional period of sixty-three (63) months (the **"Extended Term"),** commencing on September 1, 2020 and expiring at 11 :59 P.M. local time on November 30, 2025 (the **"Expiration Date").**

4. **Base Rent.** Notwithstanding anything to the contrary set forth in the Lease, effective as of July 1, 2020, and continuing through and including the Expiration Date, Tenant's Base Rent obligation for the Premises shall be as follows and all Rent shall be paid in accordance with the terms of the Lease:

| Months | PSF/annum | Annual | Monthly |
|---|---|---|---|
| 1-12 | $18.25 | $454,425.00 | $37,868.75 |
| 13-24 | $18.80 | $468,120.00 | $39,010.00 |

| | | | |
|---|---|---|---|
| 25-36 | $19.36 | $482,064.00 | $40,172.00 |
| 37-48 | $19.94 | $496,506.00 | $41,375.50 |
| 49-60 | $20.54 | $511,446.00 | $42,620.50 |
| 61-65 | $21.16 | $526,884.00 | $43,907.00 |

Notwithstanding the foregoing, Base Rent, but not Additional Rent payments, shall be abated for August 2020; and months 13 and 25, only, of the Extended Term. Should there occur an uncured Event of Default by Tenant during the first year of the Extended Term, Landlord shall be entitled to recover from Tenant (in addition to all other rights and remedies available to Landlord) the abated Base Rent. Landlord's management fee shall not be reduced on account ofthe abatement in Base Rent, and the Base Rent abatement shall be disregarded for purposes of calculating any management fee based on a percentage of rental revenues.

5. **Additional Rent; Operating Expenses.** All Additional Rent payable by Tenant shall continue to be paid by Tenant, in addition to the Base Rent, in accordance with the terms and conditions of the Lease.

6. **Option to Extend Term.** (a) Tenant acknowledges that Tenant does not enjoy any further renewal rights under Section 3.02 of the Lease. However, provided that (i) Tenant is not in material default of this Lease, nor any event that with the giving of notice and/or the passage of time would constitute a material default, or that Landlord has not provided to Tenant a notice of default more than two (2) times, and (ii) Tenant is the sole occupant of all of the Premises, Tenant shall have the right and option to extend the Lease Term Lease for one (1) additional sixty (60) month period (the **"Renewal Term"),** commencing as of the date immediately following the Expiration Date on the same terms and conditions as are in effect on the last day of the Extended Term, except that Tenant shall have no further right to renew the Term, Landlord shall not have any obligation to perform any work improvements to the Premises, and the Base Rent shall the FMV (as defined below), as determined by Landlord and Tenant using the standard and process set forth below (the **"Renewal Option").** This Renewal Option is exercisable by Tenant giving Landlord prior written notice of Tenant's election to extend the Lease Term **("Renewal Notice"),** on or prior to the date which is ten (10) months prior to the Expiration Date; it being agreed that time is of the essence with respect to the Renewal Notice. If and when the Renewal Term is in effect, all references to the Lease Term, shall be deemed to mean the Renewal Term. This Renewal Option is personal to Tenant and is non-transferable to any assignee, subtenant (regardless of whether any such assignment or sublease was made with or without Landlord's consent) or other party. If Tenant does not timely provide a Renewal Notice to Landlord, Tenant's Renewal Option shall be deemed not to have been exercised, and thereafter shall be void and of no further force or effect.

(b) Within thirty (30) days after receiving the Renewal Notice, Landlord will give notice to Tenant (the **"Rent Notice")** of Landlord's opinion of the FMV. If Tenant does not respond to the Rent Notice within ten (10) days after receiving it, Landlord's opinion of the FMV shall be deemed accepted as the Base Rent due for each lease year of the Renewal Term. If, during such ten (10) day period, Tenant gives Landlord notice that Tenant contests Landlord's determination of the FMV (an **"Objection Notice"),** which notice must contain therein Tenant's opinion of the FMV, the parties may then negotiate to determine a FMV acceptable to both parties to arrive at a mutually agreeable Base Rent for each lease year of the Renewal Term, which, in no event, shall be no less than the Base Rent applicable for the last lease year of the Extended Term. When the

parties come to an agreement, they will both execute an amendment to this Lease, establishing the Base Rent for each lease year of such Renewal Term.

(c) If, within fifteen (15) days after Landlord's receipt of the Objection Notice, the parties have not signed such an amendment to this Lease, the parties agree to submit the determination of FMV applicable to the Renewal Term to arbitration as set forth in Section 12.01 of the Lease and this Section (the **"Arbitration Election").**

(d) **"FMV** shall mean, for the purposes of this Second Amendment, as of the date in question, the fair market value of the then current annual rental charge, including provisions for subsequent increases and other adjustments for leases or agreements to lease then currently being negotiated, or executed in comparable space located in the, the office/flex park of which the Building is a part, and leases or agreements to lease then currently being negotiated or executed for comparable office/flex space located elsewhere in office/flex space buildings located in South Airport, North of Roeser, Phoenix, Arizona submarket, for a term commencing on or about the Expiration Date. In determining FMV, the following factors, among others, shall be taken into account and given effect: size, location of premises, lease term, condition ofthe building, condition of the premises, economic concessions (including free rent, tenant improvements being performed by landlords for tenants, or tenant improvement allowances being granted by landlords to tenants), then being granted by landlords to tenants and services provided by landlords.

(e) All arbitrators shall not have been employed or retained by either Landlord or Tenant or any affiliate of either for a period of at least five (5) years prior to appointment pursuant hereto. The arbitrators shall be real estate brokers with at least ten (10) years full-time commercial brokerage experience who are familiar with the FMV of office /flex space in the Phoenix, Arizona market. If the dispute between the parties as to FMV has not been resolved before the commencement of Tenant's obligation to pay Base Rent based upon such FMV, then Tenant shall pay Base Rent and other charges under the Lease for the Premises based upon the FMV designated by Landlord until either the agreement of the parties as to the FMV, or the decision of the arbitrators, as the case may be, at which time Tenant shall pay any underpayment of Rent and other charges to Landlord, or Landlord shall refund any overpayment of Rent and other charges to Tenant.

7. **Alterations.** Section 6.05(a) of the Lease is hereby amended by deleting therefrom the first sentence and by inserting the following in lieu thereof:

> "After the Tenant Improvements are constructed, Tenant shall be permitted to make, upon prior notice to Landlord, but without the requirement that Tenant obtain Landlord's consent, non-structural or cosmetic alterations, additions or improvements to the Property, provided that such (i) are not visible from the exterior of the Premises, (ii) do not affect any of the Building's mechanical, electrical, plumbing, HVAC or life safety systems, the roof, or the structural strength or components of the Building (iii) do not require penetrations into the floor, ceiling or walls, (iv) do not require work within the walls, below the floor or above the ceiling, and (v) is estimated to cost less than Fifty Thousand Dollars ($50,000) in each occurrence (each, a **"Permitted Alteration").** If Tenant desires to undertake any alteration, addition or improvement to the Building that is not a Permitted Alteration, Tenant shall first obtain the consent of Landlord, which such consent shall not

be unreasonable withheld, conditioned or delayed. Landlord shall not impose any fee or charge on Tenant in connection with Landlord's review of any plans or specifications or any inspections that Landlord deems necessary or desirable in connection with any alteration, addition or improvement, except that Landlord may charge Tenant up to Five Thousand Dollars ($5,000) in each instance for Landlord's actual out-of-pocket costs reasonably incurred with respect to any third party consultants or engineers engaged by Landlord in connection with Landlord's review of the Tenant's plans and specifications for any alteration, addition or improvement to the Premises.

8. **Contractors.** Section 6.05(b) of the Lease is hereby amended by adding thereto following the last sentence thereof the following:

"Tenant shall be permitted, subject to the prior approval of Landlord, which such approval shall not be unreasonably withheld, conditioned or delayed, to select the contractors, subcontractors, engineers and architects to design, plan and undertake any alterations, additions or improvements to the Premises."

9. **Tenant Improvements; Tenant Allowance.** Tenant is in possession of the Premises. Landlord shall have no obligations whatsoever to improve or pay for improvements to the Premises for Tenant's continued use and occupancy thereof, except as follows:

(a) Any improvements, alterations, or additions Tenant undertakes to remodel or reconstruct the Premises as part of the initial occupancy for the Renewal Term are herein referred to as **"Tenant Improvements".** Pursuant to Section 9(e) of this Second Amendment, Tenant shall be responsible for the cost of any Tenant Improvements, and Tenant will have plans for such Tenant Improvements designed and approved in accordance with Section 9(b) of this Second Amendment, and constructed by Tenant in accordance with Section 9(c) of this Second Amendment. Tenant confirms all Tenant Improvements are for the immediate use and benefit of Tenant only.

(b) If, due to the nature of such improvements as reasonably determined by Landlord or if required by Laws, Tenant's improvement specifications and plans for such Tenant Improvements to the Premises require that they are prepared by an architect or engineer, Tenant agrees that such architect or engineer will be licensed by the State of Arizona selected by Tenant, subject to the prior approval of Landlord, which such approval shall not be unreasonably withheld, conditioned or delayed **("Tenant's Architect").** The Tenant's Architect plans for the Tenant Improvements will be prepared in sufficient detail to permit Tenant to construct the Tenant Improvements, and shall include, as applicable, a partition layout (dimensioned), door location and door schedule including hardware, reflected ceiling plan, telephone and electrical outlets with locations (dimensioned), special electrical, cabling, HVAC and/or plumbing work, mechanicals, special loading requirements, such as the location of file cabinets and special equipment, openings in the walls or floors, all necessary sections and details for special equipment and fixtures, and finishes including, without limitation, carpentry and millwork, floor coverings, wall coverings, color schedules, and any other special finishes. The Tenant's Architect plans for the Tenant Improvements shall be prepared in accordance, and shall comply in all material respects, with all laws, ordinances, government regulations or orders (collectively, **"Laws).** Landlord shall not unreasonably withhold, condition or delay its approval of the plans for the Tenant Improvements.

Within ten (10) business days after receipt, Landlord shall respond to any specifications and plans ofthe Tenant Improvements submitted by Tenant, stating any specific comments or objections that Landlord may have. If Landlord fails to respond within such ten (10) business day period, Tenant's plans shall be deemed approved. Tenant will continue to submit applicable Tenant Architect plans and specifications for Tenant Improvements and Landlord will continue to approve or disapprove the same in the process set forth above until such are approved or deemed approved by Landlord. Upon approval by Landlord, the plans and specifications for the Tenant Improvements shall become final and shall not be materially changed without Landlord's further approval, which shall not be unreasonably withheld, conditioned or delayed (as finally approved, the **"Tenant Improvement Plans").** Landlord's review or approval of the Tenant Improvement Plans does not constitute a code review and shall not be a representation or warranty of Landlord that the Tenant Improvement Plans are fit for any use or comply with any Laws or other legal requirements, and Tenant shall have no right to rely upon any review or approval for such purposes. Landlord shall have no liability to Tenant or any third party by reason of such review or approval, and Landlord's review of any plans and specifications and monitoring of construction shall be solely for its own benefit. The Tenant Improvements shall be the property of Tenant until the expiration or termination of the Lease. At the expiration or termination of the Lease, Tenant shall comply with the provisions of Section 6.06 of the Lease with respect to the Tenant Improvements.

(c) Tenant shall complete the Tenant Improvements to the Premises substantially in accordance with the Tenant Improvement Plans and applicable provisions of the Lease, and this Second Amendment, and the delivery of permits to Landlord pursuant to Section
9(d) of this Second Amendment. The contractors and subcontractors selected by Tenant for bidding on the Tenant Improvements shall be licensed and qualified for the work they are to perform, and subject to the approval of Landlord, which shall not be unreasonably withheld, conditioned or delayed. Tenant shall require all contractors and subcontractors to be adequately insured by maintaining commercial general liability insurance with limits of coverage not less than
$2,000,000 combined single limit with a $4,000,000 general aggregate limit, naming Landlord and the Landlord Additional Insureds, as additional insureds, and at least ten (10) days prior to the commencement of construction, Tenant shall deliver a certificate of insurance for each of Tenant's contractors and their subcontractors to Landlord evidencing such insurance.

(d) All construction relating to the Tenant Improvements shall be done in a good and workmanlike manner and shall comply in all respects at the time of completion with all laws, ordinances, codes, rules and regulations of the governmental authorities having jurisdiction. Tenant shall obtain all governmental approvals and permits related to the Tenant Improvements and promptly deliver copies of same to Landlord prior to the start of any work. Within thirty (30) days after the substantial completion of the Tenant Improvements, Tenant shall provide Landlord with the following documents with respect to the Premises and the Tenant Improvements,: (i) a certificate of occupancy, if required; (ii) a full set of final and un-appealable permits and approvals, if required; (iii) "as-built" plans (hard copy and CAD); and, (iv) a statement of completion in accordance with the Tenant Improvement Plans by Tenant's Architect. In addition to the right of Landlord and its agents to inspect the Premises as set forth in Section 5.06 of the Lease, Landlord and its agents shall have the right, at its sole cost and expense, to conduct a walk-through inspection of the Premises as completed by Tenant. The warranties from Tenant's contractor(s) shall be for the benefit of Landlord, as well as Tenant, and Tenant shall deliver copies of such warranties to Landlord promptly upon receipt. As used herein, "substantial completion" of the Tenant

Improvements occurs when all aspects of the Tenant Improvements are complete in accordance with Tenant's plans and specifications therefor, save only minor punchlist items, the completion of which, by their nature, do not materially interfere with Tenant's installation of its trade fixtur es and equipment and operation of its business therein.

(e) Tenant shall, subject to Section 9(f) of this Second Am endment below, pay the applicable costs, expenses and fees incurred for the construction of the Tenant Improvements, including without limitation (i) architectural, engineering and design costs, (ii) the cost charged to Tenant by the general contractor and all subcontractors for performing such construction, (iii) construction permit fees, (iv) costs of built-in furni ture, and (v) mechanical and structural engineering fees, credited against the Tenant Improvement Allowance (as defined hereunder) upon Landlord's receipt of each Reimbursement Application (as defined hereunder) (together, the **"Tenant Improvement Costs").** In no event shall Landlord charge to Tenant, or deduct from the Tenant Improvement Allowance, any fee for any supervision, project management, or oversight Landlord elects to undertake during Tenant's construction of the Tenant Improvement Work, except that Landlord may charge Tenant up to Five Thousand Dollars ($5,000) in each instance for Landlord's actual out-of-pocket costs reasonably incurred with respect to any third party consultants or engineers engaged by Landlord in connection with Landlord's review ofthe Tenant Improvement Plans, or any tap or other fee relating to water or condenser use for supplemental air•
conditioning or sprinkler service. Landlord has no obligation to provide any construction administration or management services to Tenant.

(f) Landlord shall provide an allowance to Tenant of Three Hundred Eleven Thousand Two Hundred Fifty Dollars ($311,250.00) (the **"Tenant Improvement Allowance")** (based on Twelve Dollars and Fifty Cents ($12.50) per rentable square foot) which shall be used by Tenant to pay for the Tenant Improvement Costs in accordance with Section 9(e) ofthis Second Amendment, subject to the following limitations. The Tenant Allowance shall be applied to the actual out-of-pocket costs and expenses incurred by Tenant in connection with the Tenant Improvements for labor, materials, design, architectural and engineering fees, permits, telecommunication cabling costs, Tenant's security system, and costs of installation, and assembly/disassembly offurniture, fixtures, and equipment, except that no more than Twenty-Five Thousand Dollars ($25,000) of the Tenant Improvement Allowance may be used for design, architectural, and engineering fees, telecommunication cabling, and the purchase, installation, and assembly/disassembly of furniture, fixtures and equipment. In addition to the Tenant Improvement Allowance, Landlord shall reimburse Tenant up to Two Thousand Nine Hundred Eighty-Eight Dollars ($2,988.00) (the **"Plan Cap")** for the actual costs and expenses of one space plan and one space plan revision plan, prepared by Tenant's selected architect, with respect to the Tenant Improvements, and Tenant, subject to the Tenant Improvement Allowance, shall be responsible for all costs of design and planning above the Plan Cap.

(g) Tenant shall promptly pay all Tenant Improvement Costs as they become due. Tenant may submit to Landlord application(s) on a calendar month basis for payment reimbursement to be applied against the Tenant Improvement Allowance (each, a **"Reimbursement Application).** Each Reimbursement Application shall include: (i) any executed partial payment releases ofliens (which shall be notarized and provide a specific amount for which such lien is being waived), reasonably satisfactory to Landlord, from Tenant's general contractor and all subcontractors, as certified by Tenant, confirming the payment in full of all

Tenant Improvement Costs included in the then current Reimbursement Application (collectively, the **"Lien Waivers");** (ii) sufficient evidence of payment from Tenant to Tenant's general contractor of all Tenant Improvement Costs included in the then current Reimbursement Application; and, (iii) as applicable, a statement completed by Tenant's Architect or Tenant's third-party project manager stating that the Tenant Improvements included in the then current Reimbursement Application were substantially completed and performed in accordance with the Tenant Improvement Plans (collectively, the **"Partial Reimbursement Requirements").** When the Tenant Improvements are substantially completed in their entirety, as a condition of the final Reimbursement Application, Tenant shall provide: (i) any executed final Lien Waivers, confirming the payment in full of all Tenant Improvement Costs up to the limit of the Tenant Improvement Allowance and the release of liens against the Premises from Tenant's general contractor and all subcontractors; (ii) sufficient evidence of payment from Tenant to Tenant's general contractor of all Tenant Improvement Costs up to the limit of the Tenant Improvement Allowance; and (iii) as applicable, a statement completed by Tenant's Architect or Tenant's third-party project manager stating that the Tenant Improvements are substantially complete and were performed in accordance with the Tenant Improvement Plans (collectively, the **"Final Reimbursement Requirements").** Landlord shall have thirty (30) days after the receipt of each complete Reimbursement Application to submit its reimbursement payment to Tenant. Landlord shall not be required to issue any reimbursement payment to Tenant if the Reimbursement Application does not include the Partial Reimbursement Requirements or the Final Reimbursement Requirements, as the case may be.

(h) Tenant shall make a complete Reimbursement Application for the Tenant Improvement Costs up to the amount ofthe Tenant Improvement Allowance no later than twenty• four (24) months after the Renewal Commencement Date. Landlord shall not be required to make payments on account of the Tenant Improvement Allowance for any Tenant Improvement Costs not submitted to Landlord by the foregoing date, and Tenant shall not have any claim to any portion of the Tenant Improvement Allowance not properly used by such date. In no event shall any portion of the Tenant Improvement Allowance be used to offset Tenant's Rent obligations. If Tenant's costs and expenses in connection with the Tenant Improvements exceed the Tenant Improvement Allowance, Tenant shall be solely responsible for such excess.

10. **References.** All references in the Lease to Liberty shall be replaced with Workspace Property Trust. Wherever Tenant is required to name Landlord as an additional insured on any policy of insurance, Tenant shall also name Workspace Property Management, L.P., Workspace Property Trust, L.P., and each of their respective directors, officers, partners, shareholders, members, employees, and mortgagees **(Landlord Additional Insureds")** as additional insureds.

11. **Indemnification.** The indemnification of Landlord by Tenant pursuant to Section 5.05 of the Lease is hereby extended to the Landlord Additional Insureds on the same terms and provisions of Section 5.05.

12. **Guaranty.** Tenant shall cause Symphony Buyer, Inc., to guaranty the payment and performance ofthe obligations of Tenant under the Lease pursuant to the terms of a separate lease guaranty, the form of which is attached hereto as **Exhibit "AA"** (the **"Guaranty).** The executed Guaranty shall be delivered to Landlord concurrently with the delivery by Tenant of this Second Amendment.

13. **Notices.** The address for Landlord under Section 1.02 of the Lease is hereby changed to:

c/o Workspace Property Trust
700 Dresher Road
Suite 150
Horsham, PA 19044
Attention: Anthony A. Nichols, Jr., Senior Vice-President

In addition, the address for Landlord's counsel under Section 13.06 is hereby changed to: McCausland Keen + Buckman
80 W. Lancaster Avenue
4! Floor
Devon, PA 19333
Attention: Stephan K. Pahides

The address for Tenant under Section 1.03 of the Lease is hereby changed to: Inform Diagnostics
6655 N MacArthur Blvd
Irving, TX 75039
Attention: Facilities Department

In addition, the address for Landlord's counsel under Section 13.06 is hereby changed to: Inform Diagnostics
6655 N MacArthur Blvd
Irving, TX 75039
Attention: Legal Counsel

14. **Brokers.** Landlord and Tenant each covenants and represents to the other that it has dealt with no brokers in connection with this Second Amendment other than Transwestem Commercial Services Arizona, L.L.C., representing Tenant, and CBRE Group, Inc., representing Landlord (collectively, the **"Brokers")** and Landlord agrees to pay a one-time leasing commission to the Brokers pursuant to a separate agreement entered into by the Brokers and Landlord, and Landlord shall indemnify Terrant therefrom. Landlord and Terrant each agrees to indemnify and hold the other harmless from any and all claims for commissions or fees in connection with this Second Amendment from any real estate brokers or agents other than the Brokers.

15. **Survival.** All references to the "Lease" shall refer to the Lease as modified by this Second Amendment. Except as expressly modified herein, the terms and conditions of the Lease shall remain unchanged and in full force and effect in accordance with its terms. Specifically, without limitation, in the event of any default by either party of any of its obligations under the Lease, as hereby amended, the non-defaulting party shall be entitled to pursue all remedies available under the Lease, as hereby amended, or otherwise available at law or in equity.

16. **Lease Confirmation.** Except as amended hereby, the Lease remains in full force and effect and is hereby ratified and confirmed. The Lease, as amended hereby, constitutes the entire agreement between Landlord and Tenant with respect to the Premises, may be amended or altered only by written agreement executed by both parties, supersedes all prior agreements, whether written or oral, between the parties, and is binding on the parties' successors and assigns.

18. **Successors and Assigns.** This Second Amendment shall be binding upon and inure to the benefit ofthe parties hereto and their respective successors and permitted assigns.

19. **Ministerial Actions.** Each of Landlord and Tenant agrees that it will not raise or assert as a defense to any obligation under this Second Amendment, or make any claim that this Second Amendment or the Lease is invalid or unenforceable, due to any failure of this document or the Lease to comply with ministerial requirements, including requirements for corporate seals, attestations, witnesses, notarizations or other similar requirements, and each party hereby waives the right to assert any such defense or make any claim of invalidity or unenforceability due to any of the foregoing.

20. **Signatures; Multiple Counterparts.** This Second Amendment may be executed in multiple counterparts, each of which, when assembled to include an original signature for each party contemplated to sign this Second Amendment, will constitute a complete and fully executed original. All such fully executed counterparts will collectively constitute a single Second Amendment. Landlord and Tenant each expressly agrees that if the signature of Landlord and/or Tenant on this Second Amendment is not an original, but is a digital, mechanical or electronic reproduction (such as, but not limited to, a photocopy, e-mail or PDF), then such digital, mechanical or electronic reproduction shall be as enforceable, valid and binding as, and the legal equivalent to, an authentic and traditional ink-on-paper original wet signature penned manually by its signatory.

**[SIGNATURE PAGE FOLLOWS]**

**IN WITNESS WH EREOF,** Landlord and Tenant, intending to be legally bound, have executed this Second Amendment as of the day and year last below written.

**LANDLORD: WPTLAND2LP**
By: WPT LAND 2 GP LLC, its general partner

By: /s/ Anthony A. Nichols, Jr.

Anthony A. Nichols, Jr.
Senior Vice President

Date: July 1, 2020

**TENANT:**

**INFORM DIAGNOSTICS, INC.,**
By. /s/ Darryl L. Goss
Name: Darryl L. Goss
Title: Chief Executive Officer

Date: July 1, 2020

**EXHIBIT 10.49**

FIRST AMENDMENT AND PARTIAL RESTATEMENT OF LEASE

THIS First Amendment and Partial Restatement of Lease (this "Amendment") is entered into as of December 30, 2013 (the "Effective Date"), between LC MED PROPERTY TT, LLC, a Delaware limited liability company ("Landlord"), successor-in-interest to iStar CTL I, L.P. ("Original Landlord"), and MIRACA LIFE SCIENCES, INC., a Delaware corporation ("Tenant"), successor-in-interest to Caris Diagnostics, Inc. ("Original Tenant").

RECITALS:

A. Original Landlord and Original Tenant entered into a certain lease agreement (the "Original Lease") dated effective October 20, 2008 (the Original Lease and this Amendment are collectively referred to as the "Lease") for 172,232 square feet of rentable area (the "Premises"), in the building known as Sierra at Las Colinas, Building I, located at 6655 N. MacArthur Boulevard, Irving, TX 75039 (the "Building"); and

B. Landlord and Tenant have agreed to amend and partially restate the Lease to among other things: (1) extend the term of the Lease; (2) restructure the Rent; (3) restructure the obligations of the parties with respect to maintenance, repair, replacement and services; and (4) otherwise modify the Lease, subject to the terms and conditions of this Amendment.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are acknowledged, and provided that there is no uncured Event of Default under the Lease, the parties agree, and the Lease is amended and partially restated as follows:

AGREEMENTS:

1. Definitions. All capitalized terms not otherwise defined herein have the meanings given them in the Original Lease. The terms "Expense Stop", "Base Tax Year", "Operating Costs" and "Controllable Operating Costs", wherever they appear in the Lease, are of no further force or effect.

2. Extension. The Term of the Lease Is extended for an additional forty-eight (48) months (the "Extended Term") beyond the current Expiration Date of May 31, 2020, so that the Extended Term will expire May 31, 2024, upon the same terms and conditions as provided in the Lease. There are no other options to renew or extend. As used in the Lease, the term "Term" Includes both the original Term and the Extended Term.

3. Boric Rent. The schedule of Basic Rent due under the Lease is modified commencing with the payment date of April 1, 2014 (the "Net Rent Effective Date") as follows:

| **Lease Months** | **Annual Basic Rent Rate Per Rentable Square Foot** | **Annual Basic Rent** | **Monthly Basic Rent** |
|---|---|---|---|
| 04/01/14 - 03/31/15 | $17.25 | $2,971,002.00 | $247,584.00 |
| 04/01/15 - 03/31/16 | $17.60 | $3,030,422.00 | $252,535.00 |
| 04/01/16 - 03/31/17 | $17.95 | $3,091,030.00 | $257,586.00 |

| Lease Months | Annual Basic Rent Rate Per Rentable Square Foot | Annual Basic Rent | Monthly Basic Rent |
|---|---|---|---|
| 04/01/17 - 03/31/18 | $18.31 | $3,152,851.00 | $262,738.00 |
| 04/01/18 - 03/31/19 | $18.67 | $3,215,908.00 | $267,992.00 |
| 04/01/19 - 03/31/20 | $19.05 | $3,280,226.00 | $273,352.00 |
| 04/01/20 - 03/31/21 | $19.43 | $3,345,831.00 | $278,819.00 |
| 04/01/21 - 03/31/22 | $19.81 | $3,412,747.00 | $284,396.00 |
| 04/01/22 - 03/31/23 | $20.21 | $3,481,002.00 | $290.084.00 |
| 04/01/23 - 03/31/24 | $20.62 | $3,550,662.00 | $295,885.00 |
| 04/01/24 - 05/31/24 | $21.03 | $3,621,635.00 | $301,803.00 |

4. Rent. Section 4 of the Original Lease is amended and restated in its entirety to read as follows:

Payment. Tenant shall timely pay to Landlord Rent, without notice, demand, deduction or set off (except as otherwise expressly provided herein), by wire transfer at Landlord's address provided for in the Lease or as otherwise specified by Landlord, accompanied by all applicable state and local sales or use taxes. The obligations of Tenant to pay Rent and other sums to Landlord and the obligations of Landlord under this Lease are independent obligations. Basic Rent adjusted as herein provided, shall be payable monthly in advance. Tenant shall pay Additional Rent at the same time and in the same manner as Basic Rent. Unless a shorter time period is specified in the Lease, all payments of miscellaneous Rent charges (that is, all Rent other than Basic Rent and Additional Rent shall be due and payable within 30 days after Landlord's delivery to Tenant of an invoice therefor. Landlord and Tenant understand and agree that the Lease is a "net lease"; that is, it is the intent of the parties that any and all sums due hereunder, including Basic Rent, Insurance Costs, any items included as Additional Rent, and all other sums payable hereunder by Tenant are to be paid by Tenant without notice (except as specifically provided in the Lease) or demand, and, except where such costs are expressly and solely the obligation of Landlord, shall be net to Landlord, without set-off-counterclaim, abatement, suspension, deferment, diminution, deduction or defense. "Additional Rent" means any sums other than Basic Rent due and payable to Landlord under the Lease. The term "Net Rent Effective Date" means April 1, 2014.

5. Premises. As a material part of the consideration for this Amendment, Tenant accepts the Premises in "AS IS", "WITH ALL FAULTS" condition as of the Effective Date of this Amendment. Tenant acknowledges that it occupies the Premises and as such is fully aware of the current condition of the Premises, the Building and the Project and their suitability for Tenant's use, and Tenant is not relying upon any representations or warranties of Landlord or Landlord's agents, officers, directors, members, partners, or employees. Tenant specifically acknowledges that Landlord has made no representations or warranties whatsoever concerning the condition of any aspect of the Premises, the Building or the Project, or the present or future suitability for Tenant's use, disclaims reliance on any such representations or warranties, and Tenant waives all implied warranties. From and after the Net Rent Effective Date, Landlord has no responsibility

to make any alterations or improvements to the Premises, the Building, or the Project, except as expressly set forth in this Amendment.

6. Landlord's Obligations. Section 7 of the Original Lease is amended and restated in its entirety to read as follows:

Landlord's Maintenance and Repair Obligations. From and after the Net Rent Effective Date. Landlord shall be obligated to maintain and repair (and replace, if necessary) the Building's Structure only. Costs for maintenance and repair of the Building's Structure, including replacement of sealants in the Building's curtain walls, shall be reimbursed by Tenant within thirty (30) days of receipt of invoice. Costs for replacement of the Building's structure (except sealants in the Building's curtain walls) shall be paid by Landlord without reimbursement from Tenant. Landlord shall not be responsible (1) for any such work until Tenant delivers to Landlord written notice of the need therefor or (2) for alterations to the Building's Structure required by Law because of Tenant's use of the Premises (which alterations shall be performed by Tenant at Tenant's cost). Landlord shall, in its commercially reasonable discretion, determine whether, and to the extent, repairs or replacements of the Building's Structure are the appropriate remedial action. Landlord may elect, by written notice to Tenant, to cause Tenant to make such maintenance and repairs as Landlord and Tenant agree are necessary to the Building's Structure, and in such event Tenant shall (or shall cause its Property Manager) to effectuate such maintenance and repairs in accordance with contracts, plans and specifications reasonably reviewed and approved in writing by Landlord. All other improvements, equipment, and other physical facilities in or serving the Premises, the Building or the Project are Tenant Repair items.

7. Tenant's Maintenance and Repair Obligations. Subsection 8(b) of the Original Lease is amended and restated in its entirety as follows:

(a) Repairs: Maintenance. Tenant shall maintain the Premises in a clean, safe, and operable condition, and shall not permit or allow to remain any waste or damage to any portion of the Premises. Additionally, Tenant, at its sole expense, shall repair, replace and maintain in good condition and in accordance with all Laws and the equipment manufacturer's suggested service programs, all portions of the Premises and the Building, including (i) the Building's Systems, including the Building's restrooms and mechanical rooms; (ii) Tenant's Off-Premises Equipment; (iii) the HVAC system including components thereof; (iv) existing electrical equipment and distribution facilities; (v) an operative fire and life safety system with an addressable panel and full sprinklers as required by applicable Laws; (vi) freight and passenger elevators; (vii) Building windows, glass and plate glass, doors and office entries; (viii) curtain wall sealants; and (ix) the Project's parking areas and other exterior areas of the Project, including driveways, alleys, landscape and grounds of the Project and utility lines serving the Project (collectively, "Tenant Repair Items").

(b) Standards. Tenant shall maintain the Tenant Repair items in a good condition, consistent with the operation of similar class office buildings in the market in which the Building is located, including maintenance, repair, and replacement of the exterior components of the Budding (including painting but excluding the Building's Structure), landscaping sprinkler systems, and any items normally associated with the foregoing. Tenant shall make no repairs or replacements of exterior components of the Building without Landlord's prior written approval.

Despite anything to the contrary contained in the Lease, if there is any dispute over whether, and to the extent, repairs or replacements are the appropriate remedial action, Landlord shall make such determination in its commercially reasonable discretion. "Good condition" means that the improvement, structure, equipment or other item is (i) continuously and property maintained in accordance with the manufacturer's requirements or recommendations or, in the absence of any such requirements or recommendations, best commercial maintenance practices appropriate to the item; (ii) promptly repaired or (if necessary) replaced to preserve the intended function of the Item, any system of which it is a part, and any other item or system the proper function of which depends on the proper function of the item in question. Tenant's obligation to keep Tenant Repair Items in good condition includes the obligation to make any repairs and replacements that are required as a result of use (normal or excessive), natural deterioration, breakage, failure, obsolescence, exposure to the elements, normal wear and tear, and any other cause, except that Tenant's repair and restoration obligations upon a Casualty will be governed exclusively by Section 16 of the Lease, and upon a Taking will be governed exclusively by Section 14 of the Lease.

(c) Maintenance, and Service Contracts. With respect to the following Building Systems: (i) the HVAC system, (ii) the Building's passenger and freight elevators (the "Elevator System"), (iii) the fire sprinkler system, including fire alarm and/or smoke detection (the "Fire/Life Safety System"), (iv) landscaping and irrigation systems, and (v) asphalt, concrete and parking lot maintenance (collectively, the "Operations Systems"), Tenant shall enter into regularly scheduled preventive maintenance/service contracts for all Operations Systems, each in compliance with Landlord's specifications and otherwise in form and substance and with a contractor reasonably acceptable to Landlord, and deliver copies thereof to Landlord, by the Net Rent Effective Date. Tenant shall keep such maintenance/service contracts in effect during the Term. At least 30 days before the end of the Term, Tenant shall deliver to Landlord a certificate from an engineer reasonably acceptable to Landlord certifying that the Operations Systems are then in good condition and working order. All maintenance and service contracts shall expire no later than the scheduled Expiration Date of the Lease, and shall be terminable early upon thirty (30) days' written notice.

(d) Amortized Costs: Landlord's Right to Maintain.

(1) The outstanding balance due for replacement of Building cooling towers is $226,752.88 (the "Outstanding Replacement Cost") as of the December 1, 2013. Despite anything to the contrary in this Amendment, Tenant shall pay the Outstanding Replacement Cost as provided in Section 4(b)(2)(c) of the Original Lease, amortized without interest in equal monthly payments of Additional Rent in the amount of $2,519.48, until paid in full.

(2) During the Term, Landlord shalt not be obligated to maintain or make any additional repairs or replacements of any nature or description except with respect to the Building's Structure. Despite the foregoing, if Tenant fails, after reasonable notice, to maintain or to commence and thereafter to proceed with diligence to make any repair required of it pursuant to the terms of the Lease, Landlord, without being under any obligation to do so and without thereby waiving any default or Event of Default, may so maintain or make such repair and may charge Tenant for the cost thereof. Any expense reasonably incurred by Landlord in connection with the making of such repairs may be billed by Landlord to Tenant monthly, or immediately, at Landlord's option, and shall be due and payable within thirty (30) days after the date of such

billing, or at Landlord's option, may be deducted from the Security Deposit. In addition, if Tenant at any time requests and Landlord agrees (without having any obligation to so agree) that Landlord be responsible for any portion of Tenant's maintenance and repair obligations under the Lease. Landlord may so maintain or make such repair (and Tenant will not be deemed to be in default by reason of Landlord's assumption of the obligation) and charge Tenant for the cost thereof, which shall be billed and paid as set forth in the immediately preceding sentence.

(e) Excess Utility Use. Tenant shall not install any electrical equipment requiring special wiring or requiring power in excess of the capacity available to Tenant as of the date of that certain First Amendment and Partial Restatement of Lease unless approved in advance by Landlord, which approval shall not be unreasonably withheld. Tenant shall not install any electrical equipment requiring power in excess of the capacity available to Tenant as of date of that certain First Amendment and Partial Restatement of Lease unless approved in advance by Landlord, which approval may be withheld in Landlord's sole discretion. The use of electricity In the Premises shall not exceed the capacity of existing feeders and risers to or wiring In the Premise. Any risers or wiring required to meet Tenant's excess electrical requirements shall, upon receipt of written request by Tenant, be installed by Tenant at Tenant's cost. If, in Landlord's judgment, such risers or wiring are necessary and will not cause permanent damage to the Building or the Premises, cause or create a dangerous or hazardous condition, entail excessive or unreasonable alterations, repairs, or expenses. If Tenant uses machines or equipment in the Premises which affect the temperature otherwise maintained by the air conditioning system or otherwise overload any utility, Tenant shall install supplemental air conditioning units or other supplemental equipment in the Premises, at Tenant's cost and expense, pursuant to plans and specifications reviewed and approved by Landlord.

(f) Building Management. Tenant shall, at Tenant's sole cost and expense, procure and maintain a contract with a competent, professional property management company to manage the operation and maintenance of the Building on behalf of Tenant ("Property Manager"). Landlord hereby approves Cassidy Turley as the initial Property Manager. Tenant shall provide a true and correct copy of its written contract with Property Manager, and any amendments thereto. Among other things, the contract with Property Manager shall require Property Manager to (a) carry insurance, including commercial general liability with Tenant and Landlord as Additional Insureds, professional liability and fidelity bond coverage, and to provide Landlord with certificates of insurance and original Additional Insureds endorsements; (b) provide Landlord with copies of all service and maintenance contracts entered into by Tenant or Property Manager with respect to the Premises, Building or Project, (c) provide Landlord with copies of the monthly reports provided to Tenant, and such additional information concerning the Premises, Building or Project as Landlord may from time to time request (d) provide Landlord with copies of any notices received from any governmental authority with respect to the Premises, Building or Project (e) provide an proposed annual budget, which Landlord must approve with respect to capital costs of any nature; (f) give Landlord prompt written notice of the need (or alleged need) for any maintenance, repairs, or replacements necessary to the Building's Structure; (g) provide an annual operating plan for general operation of the Property; including any proposed improvements and changes to insurance; (h) provide copies of all Tax bills, evidence of protest of tax valuations and assessments, and evidence that Taxes have been paid before delinquency; and (i) permit Landlord to have access to Property Manager's books of account for the Property, including supporting documentation, with reasonable prior notice. Any change of Property Manager shall require

Landlord's prior written approval, which approval shall not be unreasonably withheld. Any property management contract shall expire no later than the scheduled Expiration Date of this Lease, and shall be terminable early upon no more than thirty (30) days' written notice.

8. Use. Section 9 of the Original Lease is modified so that, commencing on the Net Rent Effective Date, Tenant shall bear the risk of complying with the Disabilities Acts in the Premises and in the exterior areas of the Project.

9. Insurance. Section 11(b) of the Original Lease is modified so that, commencing on the Net Rent Effective Date, the insurance to be maintained by Landlord ("Landlord's Insurance") may be a part of a blanket policy. The cost of any such Insurance. Including the allocable portion of the cost of any such blanket insurance policy or policies, shall be reasonably allocated to the Project and the other properties covered by such policy or policies as reasonably determined by Landlord, and shall be paid by Tenant on a monthly basis as Additional Rent. Landlord shall from time to time inform Tenant of the estimated annual cost of Landlord's insurance allocable to the Project, and Tenant shall pay 1/12th of the estimated annual cost as identified by Landlord when it pays each monthly installment of Basic Rent. Landlord may re-estimate from time to time, and the parties shall adjust any overpayment or underpayment within thirty (30) days following receipt of re-estimate. Upon receipt of written request (but not more frequently than annually). Landlord will provide Tenant with a written statement of the cost of Landlord's Insurance or allocable portion thereof and such substantiating information as Tenant may reasonably request.

10. Real Property Taxes.

(a) Tenant shall pay Taxes allocable to the Premises Building or Project during the Term of this Lease. All such payments shall be made at least thirty (30) days prior to the delinquency date of the applicable installment. Tenant shall promptly furnish Landlord with satisfactory evidence that such Taxes have been paid. If any Taxes to be paid by Tenant cover any portion of time prior to or after the expiration or earlier termination of the Term, Tenant's share of such Taxes shall be equitably prorated to cover only the period of time within the tax year that this Lease is in effect. If Tenant fails to pay any Taxes, as required hereunder. Landlord has the right to pay the same, and Tenant shall reimburse Landlord therefor upon demand. "Taxes" means taxes, assessments, and governmental charges or fees whether federal, state, county or municipal, and whether they be by taxing districts or authorities presently taxing or by others, subsequently created or otherwise, and any other taxes and assessments (including non-governmental assessments for common charges under a restrictive covenant or other private agreement) now or hereafter attributable to the Project (or its operation), excluding, however, penalties and interest thereon and federal and state taxes on income (as opposed to the "margin" tax on rents). Notwithstanding anything to the contrary herein, Taxes shall include the Texas margin tax and/or any other business tax imposed under Texas Tax Code Chapter 171 and/or any successor statutory provision. If the present method of taxation changes so that in lieu of or in addition to the whole or any part of any Taxes, there is levied on Landlord a capital tax, or amendment to such existing tax, directly on the rents received therefrom or a franchise tax, assessment, or charge based, in whole or in part, upon such rents or revenues for the Project, then all such taxes, assessments, or charges, or the part thereof so based, shall be deemed to be included within the term "Taxes" for purposes hereof. Taxes shall include the costs of consultants retained in an effort to tower taxes and all costs Incurred in disputing any taxes or in seeking to lower the tax valuation of the Project.

For property tax purposes, Tenant waives all rights to protest or appeal the appraised value of the Premises, as well as the Project, and all rights to receive notices of re-appraisement as set forth in Sections 41.413 and 42.015 of the Texas Tax Code. Tenant shall engage a tax consultant each year, at its cost and expense, to determine whether it is in the best interest of Tenant and Landlord to contest Taxes for the year in question, and if such tax consultant determines that it is in the best Interest to contest Taxes. Landlord will authorize Tenant to contest Taxes for the year in question.

(b) Landlord shall endeavor to cause the Dallas County Appraisal District to send notices of Taxes to Tenant, if Tenant receives such notices, it will promptly provide copies to Landlord. If notices regarding Taxes go to Landlord, Landlord will promptly provide copies to Tenant.

(c) In order to insure payment when due and before delinquency of any or all Taxes. Landlord reserves the right, at Landlord's option, to estimate the current Taxes applicable to the Premises, and to require such current year's Taxes to be paid in advance to Landlord by Tenant, either (i) in a lump sum amount equal to the Taxes due, at least 20 days prior to the applicable delinquency dale, or (II) monthly in advance with the payment of Basic Rent. If Landlord elects to require payment monthly in advance, the payment shall be an equal monthly amount which, over the number of months remaining before the month in which Taxes would become delinquent, would provide sufficient funds to fully discharge before delinquency the Taxes to be paid. All such monies paid by Tenant to Landlord may be intermingled with other moneys of Landlord and shall not bear interest. If there is an uncured Event of Default under the Lease. Landlord may apply any balance of funds paid to Landlord under this paragraph as though such funds were an additional Security Deposit. If Landlord elects to require Taxes to be paid in advance to Landlord by Tenant, then Landlord shall be responsible for payment of Taxes to the applicable taxing authorities before they become delinquent, to the extent (but only to the extent) of Tenant's payments to Landlord.

11. Events of Default. Section 17(b) of the Original Lease is amended and restated as follows:

"(b) Abandonment. Tenant (1) abandons the Premises and such abandonment continues for 30 or more days following written notice from Landlord to Tenant: (2) vacates the Premises or more than 50% thereof: or (3) fails to continuously operate Its business within the Premises."

12. Utilities. Section 27(i) of the Original Lease is modified (1) *by* including changing the header to read "Electricity, Telephone, Fiber, and Other Utilities"; and (2) by deleting the first sentence of (i)(1) and inserting in its place: "Tenant shall, at its sole cost and expense, contract for and pay for all electricity, telephone and fiber, gas, sewer, heat, water and all other utilities pertaining to Tenant's use of the Project, together with any taxes, penalties, surcharges, connection charges, maintenance charges and the like, and including making all applications therefor, obtaining any necessary meters and other related equipment, and paying all deposits and connection charges."

13. Allowance. In consideration of Tenant's extension of the Term of the Lease and the modifications and restatements contained in this Amendment, Tenant is entitled to an

allowance (the "Extension Allowance") in the amount of One Million Two Hundred Thousand and No/100 Dollars ($1,200,000.00), to be paid by Landlord to Tenant by wire transfer of immediately available funds on or about the Net Rent Effective Date. Despite anything to the contrary in the Lease, if Landlord fails to pay all or any portion of the Extension Allowance when it is due, and the failure continues after 30 days' written notice and time to cure, then, as Tenant's sale and exclusive remedy for such failure. Tenant may offset the unpaid portion of the Extension Allowance against Basic Rent next coming due under the Lease until the Extension Allowance is paid in full.

14. Deletions. Exhibits C (Tenant Finish-Work: Allowance) and G (Renewal Options) of the Original Lease are entirely deleted.

15. Address for Notice. Landlord's address for notice is:

LC Med Property TT, LLC
c/o RiverOak investment Corp., LLC
One Atlantic Street, Suite 703
Stamford, CT 06901
Attn: George Yerrall,

With required copy to:

The Family Office
c/o TFO USA Ltd.
555 Fifth Avenue, 6th Floor
New York, NY 10017

16. Full Force and Effect. Except as modified and restated by this Amendment, all terms and conditions of the Lease shall remain in full force and effect and landlord and Tenant shall be bound thereby. Tenant hereby represents, warrants and agrees that: (a) there exists no breach, default or event of default by Landlord under the Lease, or any event or condition which, with notice or passage of time or both, would constitute a breach, default or event of default by Landlord under the Lease, (b) the Lease continues to be a legal, valid and binding agreement and obligation of Tenant, and (c) Tenant has no offset or defense to its performance or obligations under the Lease. Tenant hereby waives and releases all demands, charges, claims, accounts or causes of action of any nature against Landlord or Landlord's employees or agents, Including without limitation, both known and unknown demands, charges, claims, accounts, and causes of action that have arisen out of or in connection with the Lease or Tenant's occupancy of the Premises under the Lease.

17. Broker. Tenant represents and warrants that it has not dealt with any broker in connection with the negotiation or execution of this Amendment. Tenant and Landlord each agree to indemnify the other against all costs, expenses, attorneys' fees, liens and other liability for commissions or other compensation claimed by any broker or agent claiming the same by, through, or under the indemnifying party.

18. Authority. Each party represents and warrants that it has due power and lawful authority to execute and deliver this Amendment and to perform its obligations under the Lease; and the Lease and this Amendment are the valid, binding and enforceable obligations of such party.

19. Prohibited Persons and Transactions. Tenant represents and warrants to Landlord that neither Tenant nor any of its affiliates, nor any of their respective partners, members, shareholders or other equity owners, and none of their respective employees, officers, directors, representatives or agents is, nor will they become, a person or entity with whom U.S. persons or entities are restricted from doing business under regulations of the Office of Foreign Assets Control ("OFAC") of the Department of the Treasury (including those named on OFAC's Specially Designated and Blocked Persons List) or under any statute, executive order (including the September 24, 2001 Executive Order Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism), or other governmental action, and is not and will not Transfer the Lease to, contract with or otherwise engage in any dealings or transactions or be otherwise associated with such person or entities.

20. Offer Not a Lease. This Amendment remains only an offer to Lease until it is fully executed by Tenant and Landlord.

21. Counterparts. This Amendment may be executed in one or more counterparts, each of which shall be effective as an original, and may be delivered by electronic PDF transmission, followed by the originals.

EXECUTED as of the Effective Date first written above.

| **LANDLORD:** | **TENANT:** |
|---|---|
| LC MED PROPERTY TT, LLC<br>a Delaware limited liability company | MIRACA LIFE SCIENCES, INC.<br>a Delaware corporation |
| By:<br>Name: Jon P. Hedley<br>Title: Authorized Signatory | By:<br>Name: Frank Basile<br>Title: CEO |
| Date: 1-7-13 | Date: 12-30-13 |

ACKNOWLEDGED AND AGREED

GUARANTOR:

CDX HOLDINGS, INC.
A Delaware corporation
By:
Name: Frank Basile
Title: CEO

Date: 12-30-13

# SECOND AMENDMENT TO LEASE

THIS Second Amendment to Lease (this "Amendment") is entered into as of February 3, 2014 (the "**Effective Date**"), between LC MED PROPERTY TT, LLC , a Delaware limited liability company ("Landlord"), successor-in-interest to iStar CTL I, L.P. ("**Original Landlord**"), and MIRACA LIFE SCIENCES, INC., a Delaware corporation ("**Tenant**"), successor-in interest to Caris Diagnostics, Inc. ("**Original Tenant**").

## RECITALS:

A. Original Landlord and Original Tenant entered into a certain lease agreement (the "Original Lease") dated effective October 20, 2008, and Landlord and Tenant entered into a certain first amendment and partial restatement of lease (the "**First Amendment**") dated as of December 30, 2013 (the Original Lease, the First Amendment, and this Amendment are collectively referred to as the "**Lease**") for 172,232 square feet of rentable area (the "**Premises**"), in the building known as Sierra at Las Colinas, Building I, located at 6655 N. MacArthur Boulevard, Irving, TX 75039 (the "**Building**"); and

B. Landlord and Tenant have agreed to amend the Lease with respect to payment of the Extension Allowance, subject to the terms and conditions of this Amendment.

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which are acknowledged, and provided that there is no uncured Event of Default under the Lease, the parties agree, and the Lease is amended as follows:

## AGREEMENTS:

1. **Definitions**. All capitalized terms not otherwise defined herein have the meanings given them in the Original Lease and the First Amendment.

2. **Allowance**. Paragraph 11 of the First Amendment is deleted and replaced with the following:

> Allowance. In consideration of Tenant's extension of the Term of the Lease and the modifications and restatements contained in the First Amendment, Tenant is entitled to an allowance (the "**Extension Allowance**") in the amount of One Million Two Hundred Thousand and No/100 Dollars ($1,200,000.00), to be paid by Landlord to Tenant by wire transfer of immediately available funds on or about the Net Rent Effective Date; provided, however, that payment of the Extension Allowance may be postponed by Landlord for up to three (3) months after the Net Rent Effective Date, without default. In consideration of this right to postpone payment, Landlord agrees to a reduction in Basic Rent in the amount of $4,000.00 for each month in which payment in full of the Extension Allowance is delayed, prorated weekly in accordance with Schedule 11(a) attached. The reduction of Basic Rent shall be calculated monthly in arrears so that, by way of example, if the Extension Allowance is paid to Tenant on April 15, Tenant shall be entitled to rent reduction in the amount of $2,000.00 (2 weeks' Basic Rent reduction), to be applied against Basic Rent coming due in May, 2014;, if the Extension Allowance is paid to Tenant on April 22, Tenant shall be entitled to rent reduction in the total amount of $3,000.00 (3 week's Basic Rent reduction), to be applied against Basic Rent coming due in May, 2014.

The Extension Allowance shall be due and payable in full on or before July 1, 2014. After July 1, 2014, there shall be no further reductions in Basic Rent. If Landlord fails to pay all or any portion of the Extension Allowance on or before July 1, 2014, and the failure continues after 30 days' written notice and time to cure, then, as Tenant's sole and exclusive remedy for such failure, Tenant may offset the unpaid portion of the Extension Allowance against Basic Rent next coming due under the Lease until the Extension Allowance is paid in full.

3. **Full Force and Effect**. Except as modified and restated by this Amendment, all terms and conditions of the Lease shall remain in full force and effect and Landlord and Tenant shall be bound thereby. Tenant hereby represents, warrants and agrees that: (a) there exists no breach, default or event of default by Landlord under the Lease, or any event or condition which, with notice or passage of time or both, would constitute a breach, default or event of default by Landlord under the Lease, (b) the Lease continues to be a legal, valid and binding agreement and obligation of Tenant, and (c) Tenant has no offset or defense to its performance or obligations under the Lease. Tenant hereby waives and releases all demands, charges, claims, accounts or causes of action of any nature against Landlord or Landlord's employees or agents, including without limitation, both known and unknown demands, charges, claims, accounts, and causes of action that have arisen out of or in connection with the Lease or Tenant's occupancy of the Premises under the Lease.

4. **Broker**. Tenant represents and warrants that it has not dealt with any broker in connection with the negotiation or execution of this Amendment. Tenant and Landlord each agree to Indemnify the other against all costs, expenses, attorneys' fees, liens and other liability for commissions or other compensation claimed by any broker or agent claiming the same by, through, or under the indemnifying party.

5. **Authority**. Each party represents and warrants that it has due power and lawful authority to execute and deliver this Amendment and to perform its obligations under the Lease; and the Lease and this Amendment are the valid, binding and enforceable obligations of such party.

6. **Counterparts**. This Amendment may be executed in one or more counterparts, each of which shall be effective as an original, and may be delivered by electronic PDF transmission, followed by the originals.

EXECUTED as of the Effective Date first written above.

**LANDLORD:** **TENANT:**
**LC MED PROPERTY TT, LLC** **MIRACA LIFE SCIENCES, INCE**
a Delaware limited liability company a Delaware corporation

By:
Name:
Title:

Date:

ACKNOWLEDGED AND AGREED

**GUARANTOR:**

CDX HOLDINGS, INC.
a Delaware corporation

By:
Name:
Title:

Date:

Exhibit 10.51

# LEASE

## OF PREMISES AT 15-19 CRAWFORD STREET

## NEEDHAM, MASSACHUSETTS

## FROM

## CRAWFORD STREET DE, LLC

## TO

## MIRACA LIFE SCIENCES, INC.

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SUMMARY OF BASIC TERMS

LEASE

OF PREMISES AT 15-19 CRAWFORD STREET,
NEEDHAM, MASSACHUSETTS

TO

MIRACA LIFE SCIENCES, INC.

DATED AS OF JANUARY 17, 2017

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The following is a summary of certain basic terms of this Lease which is intended for the convenience and reference of the parties. Capitalized terms used, but not defined, in this Summary of Basic Terms, have their defined meanings in this Lease. In addition, some of the following items or terms are incorporated into this Lease by reference to the item or term or to this "Summary of Basic Terms".

1. Landlord: Crawford Street DE, LLC, a Delaware limited liability company.

2. Tenant: Miraca Life Sciences, Inc., a Delaware corporation.

3A. Premises: A portion of the first and second floor of the Building, as depicted on Exhibit C to this Lease with an address of 15-19 Crawford Street, Needham, MA 02494.

3B. Landlord's Property: The real property with the Building and any other improvements now or hereafter thereon, now commonly known as 15-19 Crawford Street, Needham, Massachusetts, as described on Exhibit A to this Lease and depicted on Exhibit B.

3C. Leasable Square Footage of the Premises: (which includes a proportionate share of the Floor Area of the Common Areas of the Building as provided for in this Lease): an agreed upon 29,114 square feet in the aggregate, consisting of (a) 21,176 square feet on the first floor of the Building, and (b) 7,938 square feet on the second floor of the Building (the "Second Floor Premises").

3D. Leasable Square Footage of the Building: An agreed upon 40,752 square feet.

4A. Lease Term: From the Commencement Date until the end of the tenth Lease Year, subject to extension in accordance with Section 2.4(b) and subject to the other terms of this Lease.

4B. Extension Right: Tenant shall have the right to extend the Lease Term for one (1) term of five (5) years in accordance with Section 2.4(b).

4C. Commencement Date: The earlier of the: (I) Delivery Date (as defined below); or (ii) date on which Tenant commences the conduct of business in the Premises.

4D. Base Rent Commencement Date: The sixth month anniversary of the Commencement Date.

5A. Permitted Use: Subject to applicable Legal Requirements, the Premises may be used for (i) laboratory, research and development purposes, and (ii) general office and administrative purposes only and for no other purpose.

5B. Tenant's Work: Has the meaning set forth in Section 3.1.

5C. Tenant's Work Allowance: Landlord shall provide for the benefit of Tenant an allowance for the actual costs incurred by Tenant to perform Tenant's Work ("Tenant's Work Costs") in the amount equal to the product of (i) $50.00 per square foot multiplied by (ii) the Leasable Square Footage of the Premises. All Tenant's Work Costs in excess of the Tenant's Work Allowance shall be the responsibility of Tenant.

6A. Security Deposit: $107,357.88, subject to the terms and provisions of Section 2.5. The Security Deposit shall be in the form of cash or Letter of Credit, as provided in Section 2.5.

7. Tenant's Parking Allocation: Tenant's Share of parking spaces in the Parking Areas, subject to Section 2.3.

8. Base Rent: The Base Rent for the Initial Term shall be as follows:

| PERIOD | ANNUAL RATE | MONTHLY RATE | PSF RATE |
|---|---|---|---|
| Commencement Date through the day prior to the Base Rent Commencement Date | $0 | $0 | $0* |
| Base Rent Commencement Date through the end of Lease Year 1 | $429,431.50 | $35,785.96 | $14.75 |
| Lease Year 2 | $451,267.00 | $37.605.58 | $15.50 |
| Lease Year 3 | $473,102.50 | $39,425.21 | $16.25 |
| Lease Year 4 | $494,938.00 | $41,244.83 | $17.00 |
| Lease Year 5 | $516,773.50 | $43,064.46 | $17.75 |
| Lease Year 6 | $545,887.50 | $45,490.63 | $18.75 |
| Lease Year 7 | $575,001.50 | $47,916.79 | $19.75 |
| Lease Year 8 | $604,115.50 | $50,342.96 | $20.75 |
| Lease Year 9 | $633,229.50 | $52,769.13 | $21.75 |
| Lease Year 10 | $662,343.50 | $55,195.29 | $22.75 |

The Base Rent for the Extension Term shall be determined in accordance with Section 4.1(b). Landlord and Tenant intend that the rent payable under this Lease shall be net Base Rent and Additional Rent to Landlord. Except as otherwise expressly provided herein, Tenant shall pay all costs of every kind relating to the operation, maintenance, repair or replacement of the Premises, without any deduction or offset except as otherwise expressly set forth herein.

* Tenant shall pay Tenant's Utility Costs related to the Premises for the period from the Commencement Date through the day prior to the Base Rent Commencement Date.

9A. Additional Rent: Tenant's Share of Insurance Costs, Tenant's Share of Operating Costs, Tenant's Share of Taxes, Tenant's Utility Costs, and/or Other Additional Rent.

9B. Intentionally Omitted.

9C. Intentionally Omitted.

9D. Intentionally Omitted.

9E. Tenant's Utility Costs: Until any of the same are separately metered and billed to Tenant directly by the applicable utility provider, Tenant shall pay the costs for electricity, water, sewer and gas provided to the Premises (collectively, "Tenant's Utility Costs"), as provided in Section 4.6.

9F. Other Additional Rent: Includes all fees, charges, expenses, fines, assessments, interest, indemnities, or other sums other than Base Rent, Tenant's Share of Insurance Costs, Tenant's Share of Operating Costs, Tenant's Share of Taxes, and Tenant's Utility Costs due under this Lease.

10. Heat and Utilities: To be supplied by Landlord (including water and sewer charges) as part of the Operating Costs (except that Tenant's Utility Costs shall not be included in Operating Costs and shall be paid by Tenant as provided in Section 4.6) until such time as they are separately metered as part of Tenant's Work and billed to Tenant directly by the applicable utility provider.

11. First Payment: First month's Base Rent in the amount of $35,785.96, plus the Security Deposit in the amount of $107,357.88, shall be paid upon execution of this Lease.

12. Brokers: The Bulfinch Companies, Inc., having an office at First Needham Place, 250 First Avenue, Suite 200, Needham, MA 02494-2805, and Transwestern I RBJ, having an office at 99 High Street, Boston, MA 02110.

13A. Tenant's Address for Notices, Telephone Number, Fax Number and Taxpayer Identification No.:

Miraca Life Sciences, Inc.
Attn: General Counsel
6655 North MacArthur Boulevard
Irving, TX 75039
Email:
Telephone: ; Fax:

Tenant F.I.D.#

13B. Landlord's Address for Notices:

Crawford Street DE, LLC
c/o The Bulfinch Companies, Inc.
First Needham Place
250 First Avenue, Suite 200
Needham, MA 02494
Attention: Robert A Schlager
Telephone: ; Fax:

with a copy to:

The Bulfinch Companies, Inc.
First Needham Place
250 First Avenue, Suite 200
Needham, MA 02494
Attention: Mark R. DiOrio, Esquire
Telephone:  ; Fax:

**LEASE**

THIS LEASE (this "Lease"), made as of the 17th day of January, 2017, between Crawford Street DE, LLC, a Delaware limited liability company, and Miraca Life Sciences, Inc., a Delaware corporation, is as follows.

**W I T N E S E T H:**

ARTICLE I

CERTAIN DEFINITIONS

In addition to the words and terms defined elsewhere in this Lease, the following words and terms shall have in this Lease the meanings set forth in this Article (whether or not underscored):

"Additional Rent" has the meaning set forth in Item 9A of the Summary of Basic Terms.

"Back-Up Generator" has the meaning given in Exhibit G.

"Bankruptcy Laws" means any existing or future bankruptcy, insolvency, reorganization, dissolution, liquidation or arrangement or readjustment of debt law or any similar existing or future law of any applicable jurisdiction, or any laws amendatory thereof or supplemental thereto, including, without limitation, the United States Bankruptcy Code of 1978, as amended (11 U.S.C. Section 101 et seq.), as any or all of the foregoing may be amended or supplemented from time to time.

"Base Rent" has the meaning set forth in Item 8 of the Summary of Basic Terms.

"Base Rent Commencement Date" has the meaning set forth in Item 4D of the Summary of Basic Terms.

"Building" means the building located on Landlord's Property and shown on the Site Plan.

"Business Days" mean Monday through Friday, except holidays. The term "holiday" shall mean (a) the federal day of celebration' of the following holidays: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Thanksgiving, Christmas and (b) the Friday after Thanksgiving.

"Business Hours" means 8:00 a.m. to 6:00 p.m. on Business Days and 9:00 a.m. to 1:00 p.m. on Saturdays, except holidays.

"Commencement Date" has the meaning set forth in item 4C of the Summary of Basic Terms.

"Common Areas" means all areas of Landlord's Property, as designated by Landlord from time to time, located inside or outside of the Building, which are not intended for the use of a single tenant and which are intended (a) for the non-exclusive common use of Landlord, Tenant and other tenants of portions of Landlord's Property and their respective employees, agents, licensees and invitees and/or (b) to serve the Building and/or Landlord's Property. Common Areas include, without limitation, sidewalks, Parking Areas, access drives, landscaped areas, utility rooms, storage rooms, and utility lines and systems and the Common Facilities.

"Common Facilities" means those facilities, if any, located on Landlord's Property which Landlord designates from time to time as "common facilities," including, but not limited to, building systems, pipes, ducts, wires, conduits, meters, HVAC equipment and systems, electrical systems and equipment, plumbing lines and facilities, and mechanical rooms.

"Delivery Date" means the date on which Landlord makes the Premises available to Tenant for construction by Tenant of the Tenant's Work, in broom clean condition and free of all tenants and tenant furniture, fixtures and equipment, but in no event later than the date which is thirty (30) days following the date of this Lease.

"Environmental Law" means the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §9601 et seq., the Resource Conservation and Recovery Act, 42 U.S.C. §6901 et seq., the Hazardous Materials Transportation Act, 49 U.S.C. §1802 et seq., the Toxic Substances Control Act, 15 U.S.C. §2601 et seq., the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq., the Clean Water Act, 33 U.S.C. §1321 et seq., the Clean Air Act, 42 U.S.C. §7401 et seq., the Massachusetts Oil and Hazardous Material Release Prevention and Response Act, Chapter 21E of the Massachusetts General Laws, all regulations promulgated thereunder, and any other federal, state, county, municipal, local or other statute, law, ordinance or regulation (including any state or local board of health rules, regulation, or code), or any common law (including common law that may impose strict liability or liability based on negligence), which may relate to or deal with human health, the environment, natural resources, or Hazardous Materials, all as may be from time to time amended or modified.

"Event of Default" means any of the events listed in Section 12.1.

"Excusable Delay" means those matters which are beyond the reasonable control of Landlord, including, without limitation, the following: delays caused by Tenant (or by Invitees of Tenant), or delays caused by, or resulting from, acts of God, accidents, breakdowns, war, civil commotion, fire or other casualty, labor difficulties, shortages of labor, material or equipment, governmental regulations or orders, or unusual weather conditions.

"Extension Term" means the period of five years beginning at the end of the Initial Term.

"GAAP" means generally accepted accounting principles, consistently applied.

"Hazardous Materials" means, at any time, (a) any "hazardous substance" as defined in §101(14) of CERCLA (42 U.S.C. §9601(14)) or regulations promulgated thereunder; (b) any "solid waste," "hazardous waste," or "infectious waste," as such terms are defined in any Environmental Law at such time; (c) asbestos, urea-formaldehyde, polychlorinated biphenyls ("PCBs"), bio-medical materials or waste, nuclear fuel or material, chemical waste, radioactive material, explosives, known carcinogens, petroleum products and by-products and other dangerous, toxic or hazardous pollutants, contaminants, chemicals, materials or substances which may be hazardous to human or animal health or the environment or which are listed or identified in, or regulated by, any Environmental Law; and (d) any additional substances or materials which at such time are classified or considered to be hazardous or toxic under any Environmental Law.

"Initial Term" means the period beginning at 12:01 a.m. on the Commencement Date and ending at 11:59 p.m. on the last day of the tenth Lease Year.

"Insurance Costs" includes the cost of insuring the entire Landlord's Property, including without limitation the Building and other improvements now or hereafter situated thereon, and all operations conducted in connection therewith, with such policies, coverages and companies and in such limits as may be selected by Landlord (and/or which may be required by Landlord's lenders), including, but not limited to, fire insurance with extended or with all-risk coverage, comprehensive public liability insurance covering personal injury, deaths and property damage with a personal injury endorsement covering false arrest, detention or imprisonment, malicious prosecution, libel and slander, and wrongful entry or eviction, rent loss or business interruption insurance, worker's compensation insurance, plate glass insurance, contractual liability insurance, boiler insurance, and fidelity bonds. Insurance Costs shall not include increases in premiums which are paid directly by other tenants of Landlord's Property.

"Invitees" means employees, workers, visitors, guests, customers, suppliers, agents, contractors, representatives, licensees and other invitees.

"Land" means the land located at 15-19 Crawford Street, Needham, Massachusetts more particularly described in Exhibit A hereto and which is depicted on the Site Plan.

"Landlord" means Crawford Street DE, LLC, a Delaware limited liability company, its successors and assigns.

"Landlord's Property" has the meaning set forth in Item 3B of the Summary of Basic Terms.

"Leasable Square Footage" means (a) when used with respect to the Building, the Floor Area of the Building, and (b) when used with respect to the Premises, the sum of (i) the Floor Area of the Premises, plus (ii) Tenant's Share of the Floor Area of the Common Areas of the Building.

"Lease Term" means the initial Term and, if Tenant timely and properly exercises its right to extend pursuant to Section 2.4(b), the Extension Term.

"Lease Year" means the 12 month period beginning on the Base Rent Commencement Date and on each anniversary of the Base Rent Commencement Date throughout the Lease Term; provided that if the Base Rent Commencement Date is not the first day of a calendar month, the first Lease Year shall consist of the partial calendar month beginning with the Base Rent Commencement Date and the next subsequent 12 months, and each subsequent Lease Year shall commence on the first day of the month after the calendar month in which the Base Rent Commencement Date occurs.

"Legal Requirements" means all applicable laws, statutes, rules, regulations and requirements of governmental authorities, including, but not limited to, zoning laws and building codes.

"Operating Costs" means all costs, expenses and disbursements of every kind and nature (except Taxes and Insurance Costs) which Landlord shall pay or become obligated to pay in connection with operating, managing, maintaining, repairing or replacing the Landlord's Property or elements thereof, all as determined by Landlord. Operating Costs shall include, by way of illustration, but not be limited to: all charges payable by Landlord in connection with the performance of Landlord's maintenance and repair obligations with respect to the Landlord's Property; all charges payable by Landlord to provide janitorial service to the Landlord's Property; all charges payable by Landlord in connection with the maintenance, repair and replacement of HVAC equipment and systems; all charges payable by Landlord to provide utility services to the Landlord's Property, except to the extent excluded pursuant to clauses (f) or (g) below; all costs related to the operation of any shuttle or other transportation service between the Landlord's Property and public transportation stations; all costs related to any police details at any entrances to the Landlord's Property; all costs related to removal of trash, debris, and refuse; all costs related to removal of snow and ice; all costs of pest and vermin control; all costs of providing, maintaining, repairing and replacing of paving, curbs, walkways, landscaping, planters, roofs, walls, drainage, utility lines, security systems and other equipment; all costs of painting the exterior and Common Areas of the Building; all costs of repaving, resurfacing and restriping Parking Areas and drives (excluding the cost of any signage and lettering for any Parking Areas that are reserved for the exclusive use of other tenants of the Building); all costs of lighting, cleaning, waterproofing, repairing and maintaining Common Areas, Common Facilities and other portions of the Landlord's Property; all costs of licenses, permits and inspection fees, except to the extent directly attributable to the space of a particular tenant; all legal, accounting, inspection and consulting fees, except to the extent excluded pursuant to clauses (e) or (m) below; all costs of capital repairs or replacements hereafter made to the Building or Common Areas, amortized over their expected useful life based upon and including a market rate of interest; all costs of wages, salaries and benefits of operating personnel, including welfare, retirement, vacations and other compensation and fringe benefits and payroll taxes; the amount of any insurance deductible paid by Landlord in connection with an insured loss; and management fees equal to 3.5% of gross rents (which management fees may be payable to an affiliate of Landlord). However, notwithstanding the above, the following specific items shall not be included: (a) the cost of alterations to space in the Building leased to others; (b) debt service and ground rent payments; (c) any cost or expenditure for which Landlord is reimbursed by insurance proceeds or eminent domain proceeds; (d) costs for which Landlord is reimbursed under warranties provided to Landlord by contractors who have warranty obligations; (e) leasing commissions, attorneys' fees and collection costs related to negotiation and

enforcement of tenant leases unless the matter involves enforcing compliance with the Rules and Regulations or other standards or requirements for the benefit of all tenants of the Building; (f) the cost of providing electrical service (lights and plugs) to space leased to tenants; (g) expenses which are billed directly, or reasonably allocable exclusively, to any tenant of the Building; (h) salaries and bonuses of officers and executives of Landlord and administrative employees above the level of property manager or building supervisor and Landlord's general overhead; (i) the cost of any work or service performed on an extra-cost basis for any tenant of the Building; (j) the cost of any additions to the Building; (k) any cost, other than the management fee provided for above, otherwise included in Operating Costs representing an amount paid to a person or entity affiliated with Landlord which is in excess of the amount which would have been paid on an arms-length basis in the absence of such relationship; (l) depreciation, other than the amortization of capital improvements hereafter made as provided above; and (m) costs of defending any lawsuits, costs of selling, syndicating, financing, mortgaging or hypothecating any of Landlord's interest in the Landlord's Property, costs of any disputes between Landlord and its employees, or outside fees paid in connection with disputes with adjacent property owners which are not intended to benefit tenants of the Building.

"Other Additional Rent" has the meaning given in Item 9F of the Summary of Basic Terms.

"Parking Areas" means those portions of Landlord's Property which may be used for parking as depicted on the Site Plan, as such areas may be changed by Landlord from time to time.

"Permitted Transferee" means (a) an entity controlling, controlled by or under common control with Tenant, (b) an entity which succeeds to Tenant's business by merger, consolidation or other form of corporate reorganization, or (c) an entity which acquires all or substantially all of Tenant's assets or stock; provided that an entity may not become a Permitted Transferee through or as a part of a bankruptcy or other similar insolvency proceeding.

"Permitted Use" has the meaning set forth in Item 5A of the Summary of Basic Terms.

"Person" means any individual, partnership, joint venture, trust, limited liability company, business trust, joint stock company, unincorporated association, corporation, institution, or entity, including any governmental authority.

"Premises" has the meaning set forth in item 3A of the Summary of Basic Terms.

"Privacy Laws" has the meaning given in Section 7.10.

"Rules and Regulations" means the rules and regulations attached hereto as Exhibit E.

"Security Deposit" has the meaning set forth in Item 6 of the Summary of Basic Terms.

"Site Plan" means the site plan attached hereto as Exhibit B which depicts the approximate size and layout of the Land, the Building and the Parking Areas.

"Summary of Basic Terms" means the Summary of Basic Terms which is affixed to this Lease immediately after the table of contents of this Lease.

"Tax Fiscal Year" shall mean July 1 through June 30 next following, or such other tax period as may be established by law for the payment of Taxes.

"Taxes" shall mean (a) all taxes, assessments, betterments, water or sewer entrance fees and charges including general, special, ordinary and extraordinary or any other charges (including charges for the use of municipal services if billed separately from other taxes), levied, assessed or imposed at any time by any governmental authority upon or against the Land, the Building, or the fixtures, signs and other improvements thereon then comprising Landlord's Property (excluding all federal or state income or

corporate excise taxes) and (b) all attorneys' fees, appraisal fees and other fees, charges, costs and/or expenses incurred in connection with any proceedings related to the amount of the Taxes, the tax classification and/or the assessed value of the Landlord's Property. This definition of Taxes is based upon the present system of real estate taxation in the Commonwealth of Massachusetts; if taxes upon rentals or any other basis shall be substituted, in whole or in part, for the present ad valorem real estate taxes, the term "Taxes" shall be deemed changed to the extent to which there is such a substitution for the present ad valorem real estate taxes.

"Tenant" means Miraca Life Sciences, Inc., a Delaware corporation, its permitted successors and permitted assigns.

"Tenant's Utility Costs" has the meaning set forth in Item 9E of the Summary of Basic Terms.

"Tenant's Share" means the amount (expressed as a percentage) equal to (a) the Leasable Square Footage of the Premises divided by (b) the Leasable Square Footage of the Building. The percentage determined by the preceding sentence shall be rounded upward to the nearest one-tenth of one percent (0.1%). Tenant's Share is 71.5% (29,114/40,752), subject to adjustment in the event of an increase or decrease in the Leasable Square Footage of the Premises or the Leasable Square Footage of the Building.

"Tenant's Work" has the meaning given in Section 3.1.

"Tenant's Work Allowance" has the meaning given in Item 5C of the Summary of Basic Terms.

## ARTICLE II

## LEASE OF PREMISES

Section 2.1Lease Of The Premises. Landlord hereby leases the Premises to Tenant, and Tenant hereby leases the Premises from Landlord, upon and subject to the terms and provisions of this Lease and all zoning ordinances, and all matters of record affecting Landlord's Property.

Section 2.2Common Rights. The Premises are leased subject to, and with the benefit of, the non-exclusive right to use in common with others at any time entitled thereto the Common Areas and Common Facilities for all such purposes as such areas may be reasonably designated, but only in connection with lawful business in the Building and in accordance with the Rules and Regulations. Landlord shall have the right from time to time to designate or change the number, locations, size or configuration of the Building (other than the Premises), including, without limitation, the Common Areas, exits and entrances, and to modify or replace the Common Facilities, and to permit expansion and new construction therein. Tenant shall not have the right to use those portions of the Common Areas designated from time to time by Landlord as for the exclusive use of one or more other tenants.

Section 2.3Parking. Subject to the Rules and Regulations, Tenant's Invitees are authorized to use not more than Tenant's Share of the parking spaces in the Parking Areas in common with Landlord and other tenants of Landlord's Property from time to time. In the event of (a) a decrease in the number of parking spaces on Landlord's Property or (b) a change in the Leasable Square Footage of the Premises and/or Leasable Square Footage of the Building, the number of parking spaces available for use by Tenant's Invitees shall be adjusted proportionately. Tenant shall not (i) permit any of Tenant's Invitees (other than visitors) to park in spaces designated as "visitor" spaces, (ii) permit any of Tenant's Invitees to park in spaces designated as "reserved" spaces (unless reserved for Tenant), (iii) permit the total number of passenger automobiles parked on Landlord's Property by Tenant's Invitees, at any time, to exceed Tenant's Share of the parking spaces in the Parking Areas, and (iv) except for delivery trucks using designated loading and unloading facilities, permit any of Tenant's Invitee to park any vehicle on Landlord's Property other than passenger automobiles. Landlord may, from time to time, designate one or more spaces as reserved for the exclusive use of one or more of the tenants of any of the Building and/or for Landlord's Invitees.

Section 2.4Lease Term: Right to Extend: Early Termination Option.

(a) The Lease Term shall commence at 12:01 a.m. on the Commencement Date and shall end at 11:59 p.m. on the last day of the tenth Lease Year, unless Tenant timely and properly exercises its right to extend the Lease Term pursuant to Section 2.4(b). At the request of Landlord or Tenant made on or after the Commencement Date, Landlord and Tenant will execute a written amendment to, and restatement of, the Summary of Basic Terms pursuant to Section 2.6, setting forth the Commencement Date.

(b) Provided an Event of Default does not then exist, Tenant shall have the right to extend the Lease Term for one period of five years by giving Landlord written notice of extension, which notice must be received by Landlord not earlier than 15 months, nor later than 12 months prior to the expiration of the Initial Term. If such extension becomes effective, the Lease Term shall be automatically extended upon the same terms and conditions as were applicable to the Initial Term, except that (i) Base Rent for the Extension Term shall be as set forth in Section 4.1(b), and (ii) there shall be no further right to extend or renew the Lease Term beyond the Extension Term. The right of extension provided under this Section 2.4(b) is personal to Miraca Life Sciences, Inc. and is not exercisable by any subtenant or assignee (other than a Permitted Transferee) permitted hereunder.

(c) Provided that an Event of Default does not then exist at the time of the giving of such notice or on the Early Termination Date (as defined below), Tenant shall have a one-time option, exercisable by written notice given to Landlord not later than the last day of the sixth Lease Year (the "Early Termination Notice"), to terminate this Lease prior to the expiration of the Lease Term and effective as of the last day of the seventh Lease Year (the "Early Termination Date"); provided, that, as a condition of such early termination of this Lease, Tenant shall pay to Landlord all of Landlord's unamortized transaction expenses in connection with this Lease (including, without limitation, the Tenant's Work Allowance, leasing commissions and reasonable attorneys' fees) consistent with GAAP consistently applied calculated using an annual interest rate of ten percent (10%), the amount of which Landlord shall provide to Tenant within 30 days following the Commencement Date (the "Termination Fee"), simultaneously with Tenant's delivery of the Early Termination Notice to Landlord. If Tenant gives Landlord an Early Termination Notice and pays Landlord the Termination Fee in accordance with the requirements of this Section 2.4(c), this Lease shall terminate as of the Early Termination Date and Base Rent, Additional Rent and all other charges due and payable under this Lease shall be terminated as of such Early Termination Date (provided, that, such termination shall in no way release Tenant from its obligations under this Lease existing, accruing or arising on or before the Early Termination Date). If Tenant sends the Early Termination Notice to Landlord, such notice shall be deemed irrevocable on behalf of Tenant; provided, however, Landlord shall have the right, despite such Early Termination Notice, to enforce this Lease if Tenant does not fully comply with each and every provision of this Section 2.4(c) and the other provisions of this Lease prior to such early termination. Tenant's early termination option under this Section 2.4(c) shall expire and be void and of no force or effect whatsoever at 5:00 p.m. Eastern Time on the last day of the sixth Lease Year with the effect that after such date and time, Tenant shall not have any right to accelerate the end of the Lease Term pursuant to this Section 2.4(c). The right of early termination provided under this Section 2.4(c) is personal to Miraca Life Sciences, Inc. and is not exercisable by any subtenant or assignee (except a Permitted Transferee) permitted hereunder.

Section 2.5Security Deposit.

(a) Simultaneously with the execution and delivery of this Lease, Tenant shall deliver to Landlord the Security Deposit, which shall be in the form of cash or a letter of credit which satisfies the conditions of Section 2.5(b) ("Letter of Credit").

(b) The Letter of Credit must satisfy all of the following conditions: (i) the Letter of Credit must be in the form attached hereto as Exhibit D, or in such other substantially similar form as Landlord may approve, with an expiration date not less than one year after the date of the Letter of Credit; (ii) the beneficiary of the Letter of Credit must be Landlord or Landlord's designee; (iii) the Letter of Credit must be irrevocable, unconditional and transferable one or more times without charge to Landlord; (iv) the Letter of

Credit must be issued by a bank satisfactory to Landlord in its reasonable discretion; and (v) the Letter of Credit must provide that it may be drawn at a location in Boston, Massachusetts. If, at any time, the issuer of the Letter of Credit gives notice of its election not to renew, extend and/or reissue the Letter of Credit, then Tenant shall, not later than 30 days prior to the expiration of the term of the Letter of Credit, deliver to Landlord (1) a replacement Letter of Credit satisfying all of the above conditions or (2) cash in the full amount of the expiring Letter of Credit; and if Tenant fails to timely deliver to Landlord a replacement Letter of Credit as provided above or cash in the full amount of the expiring Letter of Credit, Landlord may draw on the Letter of Credit and hold the proceeds of such drawing as the Security Deposit. If (x) Landlord shall reasonably feel insecure with the creditworthiness of the bank issuing the Letter of Credit and Tenant shall fail, within 10 days after notice, to either provide a replacement Letter of Credit as provided above or cash in the full amount of the existing Letter of Credit, or (y) Tenant fails to provide Landlord with cash in the full amount of the Letter of Credit within 10 days after (I) any proceedings under the Bankruptcy Code, receivership or any insolvency law are instituted with the issuer of the Letter of Credit as debtor or (II) the bank issuing the Letter of Credit is taken over by the Federal Deposit Insurance Corporation, the Resolution Trust Corporation or a similar entity, then such failure by Tenant under clauses (x) or (y) of this sentence shall constitute an Event of Default and, in addition to any other rights which Landlord might have by reason of such Event of Default, Landlord may draw on the Letter of Credit and hold the proceeds of such drawing as part of the Security Deposit.

(c) The Security Deposit is security for the faithful performance and observance by Tenant of Tenant's obligations under this Lease and is not an advance payment of rent. If an Event of Default occurs, Landlord may use, apply or retain the whole or any part of the Security Deposit to the extent required for payment of any Base Rent or Additional Rent which is then due and payable or for any sum which Landlord may expend or may be required to expend by reason of the occurrence of an Event of Default, including, but not limited to, any damage or deficiency accrued before or after summary proceedings or other re-entry by Landlord, including the costs of such proceeding or re-entry and further including, without limitation, reasonable attorneys' fees. Landlord shall always have the right to apply the Security Deposit, or any part thereof, as aforesaid, without notice and without prejudice to any other remedy which Landlord may have, or Landlord may pursue any other such remedy in lieu of applying the Security Deposit or any part thereof. No interest shall be payable on the Security Deposit and Landlord shall have the right to commingle the Security Deposit with other funds of Landlord. If Landlord shall apply the Security Deposit in whole or in part, Tenant shall immediately upon demand pay to Landlord the amount so applied, or cause the Letter of Credit to be reinstated, to restore the Security Deposit to its original amount. Because elements of Additional Rent may be subject to annual reconciliation based on actual amounts determined to be due, in addition to the other rights provided herein to Landlord regarding the Security Deposit, Landlord shall have the right, in its reasonable discretion, upon the end of the Lease and delivery of the Premises in accordance with the terms hereof, to hold a portion of the Security Deposit until such reconciliation, at which time Landlord has the right to deduct any amounts then determined to be due from the remaining Security Deposit and return any balance of the Security Deposit to Tenant within 60 days following such reconciliation; provided that Landlord may not withhold from the Security Deposit an amount greater than the amount which Landlord reasonably estimates will be owing by Tenant upon completion of such reconciliation and Landlord will return the remaining portion of the Security Deposit not withheld by Landlord to Tenant within 60 days following the expiration of this Lease. If the remaining Security Deposit is not sufficient to pay Tenant's obligations hereunder, Tenant shall pay the same within 10 days of billing from Landlord. In the event of a sale or other transfer of the Landlord's Property, or leasing of the entire Landlord's Property including the Premises subject to Tenant's tenancy hereunder, Landlord shall transfer the Security Deposit then remaining to the vendee or lessee, Landlord shall thereupon be released from all liability for the return of such Security Deposit to Tenant, and Tenant shall look solely to the new landlord for the return of the Security Deposit then remaining. Tenant will not assign or encumber or attempt to assign or encumber the Security Deposit, and neither Landlord nor its successors or assigns shall be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance.

(d) Notwithstanding the foregoing terms and provisions of this Section 2.5 or Section 6A of the Summary of Basic Terms, so long as (i) no Event of Default has occurred during Lease Year 3, and (ii) no default by Tenant under this Lease beyond the expiration of any applicable notice and cure period then exists under this Lease, the Security Deposit shall be reduced to $71,571.92 at the end of Lease Year

3 of the Lease Term. If the Security Deposit is being held in the form of cash and not in the form of a Letter of Credit, then so long as Tenant is not in default beyond any applicable notice and cure period, within 15 days following Tenant's written notice to Landlord that it is entitled to the foregoing reduction of the Security Deposit as provided hereinabove, Landlord shall return the applicable portion of the Security Deposit to Tenant so that the remaining portion of the Security Deposit held by Landlord hereunder equals $71,571.92. If the Security Deposit is in the form of a Letter of Credit, then Tenant shall cause either (x) a replacement Letter of Credit in the amount of $71,571.92, or (y) an amendment of the existing Letter of Credit reflecting the reduced amount of the Security Deposit, and in each case otherwise satisfying all of the above conditions of this Section 2.5 to be delivered to Landlord whereupon Landlord shall, promptly following its receipt of such replacement Letter of Credit, return the original Letter of Credit to Tenant. Notwithstanding anything to the contrary contained herein, in no event shall the Security Deposit or Letter of Credit be in an amount less than $71,571.92.

Section 2.6Lease Amendment. If, pursuant to Sections 8.1 or 11.1 or any other provision of this Lease, there results a change in (or, in the case of the Commencement Date or Base Rent Commencement Date, the confirmation of) any of the terms or amounts in the Summary of Basic Terms (including, without limitation, the Leasable Square Footage of the Building, the Leasable Square Footage of the Premises, Base Rent or Tenant's Share) then in effect, Landlord and Tenant will promptly execute a written amendment to, and restatement of, the Summary of Basic Terms, substituting the changed (or confirmed) terms and recomputed amounts in lieu of each of the applicable terms and amounts then in effect which have been changed. As of the effective date of the amendment to the Summary of Basic Terms, the changed terms (and recomputed amounts) will be effective for all purposes of this Lease, and the amended and restated Summary of Basic Terms will be a part of, and incorporated into, this Lease.

Section 2.7Right of First Opportunity.

(a) Grant of Right. Tenant shall have, and Landlord hereby grants to Tenant, a one-time right of first opportunity to lease the 11,638 square foot space on the second floor of the Building that is located adjacent to the Second Floor Premises (the "ROFO Space") when it becomes available for lease after the Commencement Date, on and subject to the terms and conditions set forth in this Section 2.7. Landlord will not enter into any lease for the ROFO Space with a tenant other than Kriss Law/Atlantic, the current tenant of the ROFO Space (the "Current ROFO Tenant"), or Tenant (a "Third-Party Lease") unless and until Landlord has given to Tenant a Notice of Availability (defined below) with respect to the ROFO Space and Tenant has failed to exercise its right to lease the ROFO Space pursuant to Section 2.7(b) hereof. For purposes of Tenant's right of first opportunity, Landlord shall have the right to extend or renew the existing lease with the Current ROFO Tenant, whether such extension or renewal is provided for in the existing lease with the Current ROFO Tenant or accomplished by an amendment of such lease or a new lease with the Current ROFO Tenant, and no such extension or renewal shall be considered to be a Third-Party Lease triggering Landlord's obligation to give a Notice of Availability.

(b) Mechanics for Exercise of Right. Upon the first instance when the ROFO Space is, becomes or is about to become available for lease (subject to the last sentence in Section 2.7(a) above), Landlord shall give written notice to Tenant (a "Notice of Availability") specifying the date on or about which the ROFO Space is expected to become available for lease, the effective rent (including Base Rent and Additional Rent, if applicable) at which Landlord is willing to lease the ROFO Space, and such other terms which Landlord desires to specify. Tenant will not disclose to third parties, other than Tenant's employees, consultants and other agents who have a need to know, the contents of any Notice of Availability, and Tenant shall cause all such employees, consultants or agents to respect the confidentiality of the contents thereof. Unless a default under this Lease then exists, Tenant shall have the right, exercisable by written notice given by Tenant and received by Landlord within 10 Business Days after Landlord gives to Tenant the subject Notice of Availability, to lease all of the ROFO Space specified in the Notice of Availability on the terms specified therein.

(c) Addition of Space to Lease. If Tenant exercises its right to lease the ROFO Space pursuant to Section 2.7(b) hereof, then, as of the date which is the later of (i) 10 days after Tenant's exercise of its right to lease the ROFO Space or (ii) the date specified in the Notice of Availability, the ROFO Space

shall be added to and become a part of the Premises and subject to the terms and conditions of the Lease; provided that the ROFO Space shall be provided by Landlord to Tenant in "as is" condition, without any responsibility by Landlord to make any improvements or alterations to the ROFO Space, and without any obligation to provide any allowances, other than as specified in the Notice of Availability; and provided, further, that the terms and conditions of this Lease with respect to the ROFO Space shall be modified by the terms and conditions specified in the subject Notice of Availability. Promptly after Tenant exercises its right to lease the ROFO Space pursuant to Section 2.7(b) hereof, Landlord and Tenant shall enter into an amendment of the Lease incorporating the ROFO Space as part of the Premises and incorporating the terms specified in the subject Notice of Availability with respect to the ROFO Space.

(d) Lapse of Right. If, after Landlord gives Tenant a Notice of Availability with respect to the ROFO Space, Landlord does not receive Tenant's notice of exercise pursuant to Section 2.7(b) hereof within the time specified therein, Tenant's right of first opportunity provided for in this Section 2.7 with respect to the ROFO Space shall lapse and terminate and Landlord shall be free to enter into a Third-Party Lease with respect to the ROFO Space.

(e) Termination of Right. Tenant's right of first opportunity provided for in this Section 2.7 shall terminate 12 months before the expiration of the Lease Term. For purposes of determining the expiration of the Lease Term for purposes of this Section 2.7(e), the Extension Term shall be included only if Tenant has effectively exercised its right to extend for the Extension Term pursuant to Section 2.4(b) hereof.

(f) Rights Personal to Miraca Life Sciences, Inc. The rights in this Section 2.7 are personal to Miraca Life Sciences, Inc. and are not assignable or transferable except to a Permitted Transferee. Tenant's rights under this Section 2.7 will lapse and be of no further force or effect upon any assignment of the Lease.

(g) Default. Landlord shall have no obligation to give any Notice of Availability to Tenant at any time that an Event of Default exists, and Tenant shall have no rights under this Section 2.7 if an Event of Default exists on the date on which Tenant attempts to exercise its right to lease the ROFO Space.

## ARTICLE III

## CONDITION OF PREMISES; SIGNS

Section 3.1 Tenant's Work.

(a) Tenant may make alterations and improvements to the Premises, which shall include separately metering and/or sub-metering the Premises for electricity, water, sewer and gas services ("Tenant's Work"), in accordance with the following provisions of this Section 3.1. Tenant, in consultation with Landlord, shall prepare or cause to be prepared, and shall submit to Landlord for review and approval, working plans and specifications for any Tenant's Work to be performed ("Tenant's Work Plans"). Within 5 Business Days after receipt of any Tenant's Work Plans, Landlord shall, by written notice to Tenant, approve or disapprove the Tenant's Work Plans, Landlord will not unreasonably disapprove proposed Tenant's Work Plans. In any disapproval of Tenant's Work Plans, Landlord shall specify in reasonable detail the respects in which the Tenant's Work Plans are not satisfactory to Landlord and the changes which Landlord desires in order that the Tenant's Work Plans will be satisfactory to Landlord. After receiving any such notice of disapproval from Landlord with respect to Tenant's Work Plans, Tenant will revise the Tenant's Work Plans as reasonably requested by Landlord and will resubmit the revised Tenant's Work Plans to Landlord for review and approval in accordance with the procedures set forth above. After approval of Tenant's Work Plans by Landlord, Tenant may make changes to such Tenant's Work Plans only with the prior written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed. Tenant shall be fully responsible for compliance of any Tenant's Work Plans with all applicable Legal Requirements and for assuring that all Tenant's Work Plans provide for Tenant's Work that will comply with all applicable Legal Requirements and will satisfy Tenant's requirements. Landlord's approval of any

Tenant's Work Plans shall not constitute a certification, representation or warranty by Landlord that such Tenant's Work Plans are adequate, complete or in compliance with applicable Legal Requirements.

(b) Tenant shall perform all Tenant's Work (i) diligently and continuously, in a good and workmanlike manner, substantially in accordance with the applicable Tenant's Work Plans, (ii) in compliance with all applicable Legal Requirements, and (iii) in such a manner so as not to unreasonably disturb or otherwise unreasonably interfere with any other tenant's or occupant's use and enjoyment of, or access to, the Building or the space that such tenant or occupant leases or occupies in the Building (including, without limitation, the Current ROFO Tenant's use and enjoyment of, or access to, the ROFO Space). Any contractor performing Tenant's Work, construction manager overseeing Tenant's Work and architect preparing Tenant's Work Plans shall be subject to the prior written approval of Landlord, which approval shall be given or denied within 5 Business Days after Tenant proposes a contractor, construction manager and/or architect in writing and shall not be unreasonably withheld or conditioned. Landlord may conduct such inspections of Tenant's Work as Landlord, in its sole discretion, determines. All such inspections and reviews are for the sole benefit of Landlord, and Landlord shall have no liability or obligation to Tenant with respect to any Tenant's Work, other than the obligation to provide the Tenant's Work Allowance.

(c) So long as this Lease is in full force and effect and no Event of Default exists hereunder, Landlord shall provide to Tenant the Tenant's Work Allowance for the payment of the actual costs of designing and performing Tenant's Work (the "Tenant's Work Costs"). Landlord shall disburse the Tenant's Work Allowance for application to the payment of Tenant's Work Costs actually incurred by Tenant, subject to the following terms and conditions, and Tenant shall be responsible for all Tenant's Work Costs in excess of the Tenant's Work Allowance. Disbursement of the Tenant's Work Allowance to or at the direction of Tenant to pay or reimburse Tenant for Tenant's Work Costs shall be conditioned on the subject Tenant's Work having been performed in accordance with the above provisions of this Section 3.1, and shall be subject to Landlord's receipt of a request for payment in form and with backup reasonably satisfactory to Landlord, including, but not limited to: (I) invoices for the Tenant's Work and Tenant's Work Costs; (ii) copies of final lien waivers from all contractors and subcontractors; (iii) a certificate signed by the architect who prepared the Tenant's Work Plans and an officer of Tenant certifying that the Tenant's Work represented by the aforementioned invoices has been completed substantially in accordance with the Tenant's Work Plans and applicable Legal Requirements; and (iv) such other documentation as Landlord may reasonably require. Landlord shall make disbursements of the Tenant's Work Allowance to or at the direction of Tenant within 15 days after receipt of Tenant's written request and reasonably satisfactory backup documentation. Tenant may not request any disbursement of the Tenant's Work Allowance for Tenant's Work Costs more than 90 days after the Rent Commencement Date and any amounts not requisitioned by Tenant by such date shall be deemed forfeited by Tenant and Landlord shall have no further obligation with respect thereto. Landlord may inspect the Tenant's Work as a condition to making any requested disbursement of the Tenant's Work Allowance to confirm the status of the Tenant's Work and that the Tenant's Work has been performed in accordance with the above provisions of this Section 3.1.

(d) Landlord shall deliver possession of the Premises to Tenant on the Delivery Date for the purpose of planning and performing Tenant's Work and otherwise preparing the Premises for occupancy by Tenant. Tenant's occupancy of the Premises prior to the Rent Commencement Date shall be at Tenant's own risk. From and following the delivery of possession of the Premises by Landlord to Tenant on the Delivery Date, Tenant shall be subject to the insurance obligations set forth in this Lease and to all other obligations of Tenant under this Lease with respect to the Premises, other than the obligation to pay Base Rent and Additional Rent (but including Tenant's obligation to pay for Tenant's Utility Costs related to the Premises during such period), and, prior to entry of the Premises by Tenant, Tenant shall furnish Landlord with a certificate of insurance confirming its procurement of the insurance required by this Lease with respect to the Premises.

(e) Notwithstanding any provision herein to the contrary, if Landlord, for any reason whatsoever, cannot make the Premises available to Tenant for the purposes of constructing the Tenant's Work on or before any particulate date, Landlord shall not be in default hereunder, this Lease shall not be

void or voidable, nor shall Landlord be liable for any loss or damage resulting therefrom. Tenant hereby acknowledges and agrees that, with the exception of Landlord's obligation to deliver the Premises to Tenant on the Delivery Date in compliance with all applicable Legal Requirements, with all base building systems serving the Premises in good working order and condition (including, but not limited to, HVAC, electrical, life safety and plumbing systems) and otherwise in so-called "broom clean condition" free of all tenants, occupants and personal property, (i) the Premises are being leased by Tenant in their condition as of the Delivery Date, "As Is," without representation or warranty by Landlord, (ii) Landlord will not have any obligation to make any alterations or improvements to the Premises, and (iii) it has inspected the Premises and Common Areas of the Building and has found the same satisfactory.

Section 3.2Intentionally Omitted.

Section 3.3Signs. So long as Miraca Life Sciences, Inc. is occupying at least 50% of the Leasable Square Footage of the Premises, Tenant may, at Tenant's cost, install signage on the exterior of the Building, subject to Landlord's approval thereof and subject to compliance with the Town of Needham zoning bylaw. Tenant shall be identified by Building standard signage on the directory in the first floor Building lobby and on the entry to the Premises in a manner consistent with building standard signage at Tenant's expense. Other than the signs permitted above, Tenant shall not erect any signs which are visible from the exterior of the Building unless approved by Landlord in writing. Tenant understands that other tenants of the Building may erect signs bearing the name of such tenant(s) on or visible from the exterior of the Building. Tenant shall maintain its signs in good repair and condition. Upon termination of this Lease, Tenant shall promptly remove all of Tenant's signage and restore all damage related to the installation, existence and/or removal of such signage. The rights of Tenant to install or erect any sign on the exterior or outside of the Building are personal to Miraca Life Sciences, inc. and shall not inure to the benefit of any subtenant or assignee permitted hereunder other than with the prior written consent of Landlord to the assignment of such rights.

## ARTICLE IV

## BASE RENT; ADDITIONAL RENT

Section 4.1Base Rent.

(a) Tenant shall pay Base Rent for the Initial Term in the amounts set forth in Item S of the Summary of Basic Terms.

(b) (i) If Tenant exercises its extension option in accordance with Section 2.4(b), the annual Base Rent per square foot for the Extension Term will be the annual Market Rent (defined below) per square foot, determined in accordance with this Section 4.1(b); provided that in no event shall the annual Base Rent per square foot for the Premises for the Extension Term be less than the annual Base Rent per square foot immediately prior to the Extension Term. Within 60 days after Tenant gives to Landlord written notice of Tenant's exercise of its Extension Right pursuant to Section 2.4(b), Landlord and Tenant shall simultaneously exchange proposals setting forth their opinions as to the annual Base Rent per square foot for the Premises for the Extension Term ("Market Rent"). Landlord and Tenant shall negotiate in good faith for a period of 30 days following the exchange of proposals (such period being called the "Negotiation Period") to attempt to agree upon the Market Rent and, in the course of such negotiations, each party may from time to time submit modified proposals to the other. If the parties agree upon the Market Rent prior to the determination of the arbitrator pursuant to Section 4.1(b)(iii) below, whether such agreement is reached during or after the Negotiation Period, the Market Rent shall be as so agreed.

(i) If the parties are unable to agree upon the Market Rent within the Negotiation Period, then each party shall, upon selection of an arbitrator pursuant to Section 4.1(b)(iii) below, simultaneously exchange and submit to the arbitrator for binding arbitration a proposal as to the Market Rent. The Market Rent shall be determined as of the commencement of the Extension Term at the then current arms-length negotiated rentals being charged to new tenants (or renewal tenants for renewals and extensions which do not have pre-negotiated contract rents) for comparable space in comparable buildings located in the Town of Needham, taking into account and giving effect to, in determining comparability, without limitation, such considerations as lease term and the age, size, location, condition, and amenities of the Building. The Market Rent may include escalations at various points during the Extension Term. For purposes of such determination, the Premises shall be considered to be vacant and to be rented as a whole for its highest and best use with the degree of finishes and level of leasehold improvements then generally afforded as "building standard" by landlords in the Town of Needham. The arbitrator shall also consider and incorporate into the computation the existing improvements to the Premises. Neither party shall be deemed under any compulsion to rent or lease space. The arbitrator shall not have the right to modify any other provision of the Lease except Base Rent. Within 30 days after both parties have submitted such proposals to the arbitrator, the arbitrator shall select one of the proposals as more closely approximating the Market Rent appropriate for the Extension Term, and, unless the parties have then agreed upon the Market Rent, the proposed Market Rent set forth in such proposal selected by the arbitrator shall be deemed to be the Market Rent.

(ii) If the parties are unable to agree upon the Market Rent within the Negotiation Period, then the parties shall, within 15 days after the end of the Negotiation Period (such 15 day period being herein called the "Selection Period"), attempt to agree upon an arbitrator to whom to submit the determination of Market Rent for binding arbitration pursuant to Section 4.1(b)(ii). If the parties are unable to agree upon an arbitrator within the Selection Period, then, at the end of the Selection Period, each party shall select an arbitrator and, within 15 days after the end of the Selection Period, the arbitrators shall agree upon an arbitrator to whom the determination of Market Rent shall be submitted for binding arbitration pursuant to Section 4.1(b)(ii). If such arbitrators are unable to agree promptly upon an arbitrator, an arbitrator shall be selected by the American Arbitration Association. Any arbitrator selected by either party, by the arbitrators selected by the parties or by the American Arbitration Association shall be independent of both parties and shall have such experience, either as a licensed real estate broker or sales person or as an appraiser, as would qualify such arbitrator as an expert with respect to leasing terms in the Town of Needham. Such arbitrator shall make the determination required pursuant to Section 4.1(b)(ii) within 30 days after selection. The parties shall share equally the fees and expenses of the arbitrator to whom the determination of Market Rent is submitted. Landlord and Tenant shall each pay the fee of the arbitrator selected by it.

(c) Base Rent shall be payable in equal monthly installments of one-twelfth of the annual Base Rent then in effect and shall be paid without offset for any reason, in advance, on the first day of each calendar month during the Lease Term. If the Base Rent Commencement Date is not on the first day of a calendar month, Tenant shall pay, on or before the Base Rent Commencement Date, a proportionate part of the Base Rent for the month in which the Base Rent Commencement Date occurs based upon the annual Base Rent then in effect, divided by 360 and then multiplied by the number of days from and including the Base Rent Commencement Date through and including the last day of such month. Base Rent and Additional Rent shall be paid by an "electronic funds transfer" system arranged by and among Tenant, Tenant's bank and Landlord by Tenant submitting to Landlord a completed electronic transfer form as set forth in Exhibit H. The parties acknowledge and agree that the obligations owing by Tenant under this Section are rent reserved under this Lease, for all purposes hereunder, and are rent reserved within the meaning of Section 502(b)(6) of the Bankruptcy Code or any successor provision thereto.

Section 4.2Certain Additional Rent. Tenant shall pay, without offset for any reason, all payments of Additional Rent payable by Tenant to Landlord hereunder. If Tenant fails to pay any Additional Rent, Landlord shall have all the rights and remedies for failure to pay Base Rent. The parties acknowledge and agree that the obligations owing by Tenant under this Section 4.2 are rent reserved under this Lease, for all purposes hereunder, and are rent reserved within the meaning of Section 502(b)(6) of the Bankruptcy Code or any successor provision thereto.

Section 4.3Taxes.

(a) Tenant shall pay to Landlord, as Additional Rent, an amount equal to Tenant's Share of Taxes. Tenant's Share of Taxes shall be estimated in good faith by Landlord at the end of each Tax Fiscal Year (based on the most recent tax data available to Landlord), and shall be payable to Landlord in equal estimated monthly installments on the first day of each calendar month during the Lease Term, subject to readjustment when the actual amount of Taxes is determined. After readjustment, any shortage shall be due and payable by Tenant within 15 days of demand by Landlord and any excess shall, unless an Event of Default has occurred, be credited against future Additional Rent obligations, or refunded if the Lease Term has ended and Tenant has no further obligations to Landlord. If the taxing authority provides an estimated tax bill, then monthly installments of Tenant's Share of Taxes shall be based thereon until the final tax bill is ascertained.

(b) If, after Tenant shall have made any payment under this Section, Landlord shall receive a refund (the "Refund") of any portion of the Taxes paid on account of any Tax Fiscal Year in which such payments shall have been made as a result of an abatement of such Taxes, by final determination of legal proceedings, settlement or otherwise, Landlord shall, within 30 days after receiving the Refund, pay to Tenant (unless an Event of Default has occurred) an amount equal to the lesser of (i) Tenant's Share of Taxes for such Tax Fiscal Year or (ii) Tenant's Share of the Refund, which payment to Tenant shall be appropriately adjusted if Tenant's Share of Taxes covered a shorter period than covered by the Refund. Landlord shall have sole control of all such proceedings.

(c) If the Commencement Date of this Lease is not on July 1, or the expiration or termination of this Lease is not on June 30, Tenant's obligation in respect of Taxes shall be prorated. If the final tax bill for the Tax Fiscal Year in which such expiration or termination of this Lease occurs shall not have been received by Landlord, then within 30 days after the receipt of the tax bill for such Tax Fiscal Year, Landlord and Tenant shall make appropriate adjustments of estimated payments.

(d) Without limiting the generality of the foregoing, Tenant shall pay all rent and personal property taxes attributable to its signs or any other personal property including but not limited to its trade fixtures, the existing or any future floor coverings, wall treatments and light fixtures in the Premises.

Section 4.4Insurance Costs. Tenant shall pay to Landlord, as Additional Rent, an amount equal to Tenant's Share of Insurance Costs. Tenant's Share of Insurance Costs shall be estimated in good faith by Landlord at the end of each calendar year based on the most recent cost data available to Landlord, and shall be payable in equal estimated monthly installments on the first day of each calendar month during the Lease Term, subject to readjustment from time to time as determined by Landlord and also when actual Insurance Costs are determined. After a readjustment, any shortage shall be due and payable by Tenant within 15 days of demand by Landlord and any excess shall, unless an Event of Default has occurred, be credited against future Additional Rent obligations, or refunded promptly if the Lease Term has ended and Tenant has no further obligations to Landlord. Landlord shall provide Tenant upon request with reasonable supporting documentation for the Insurance Costs for the prior calendar year; provided that such request is received by Landlord within six months after the end of the calendar year to which such Insurance Costs relate.

Section 4.5Operating Costs. Tenant shall pay to Landlord, as Additional Rent, amounts equal to Tenant's Share of Operating Costs. For purposes of determining Tenant's Share of Operating Costs, for any calendar year during which the Building is less than 95% occupied, the Operating Costs shall be equitably adjusted, on an item-by-item basis, for such calendar year to reflect the amount which, in

Landlord's reasonable judgment exercised on a consistent basis from year to year, the Operating Costs would have been if the Building had been 95% occupied during the entire calendar year. Tenant's Share of Operating Costs shall be estimated in good faith by Landlord at the end of each calendar year based on the most recent cost data available to Landlord, and shall be payable in equal estimated monthly installments on the first day of each calendar month during the Lease Term, subject to readjustment from time to time as determined by Landlord and also when actual Operating Costs are determined. After a readjustment, any shortage shall be due and payable by Tenant within 15 days of demand by Landlord and any excess shall, unless an Event of Default has occurred, be credited against future Additional Rent obligations, or refunded promptly if the Lease Term has ended and Tenant has no further obligations to Landlord. Landlord shall provide Tenant upon request with reasonable supporting documentation for the Operating Costs for the prior calendar year; provided that such request is received by Landlord within six months after the end of the calendar year to which such Operating Costs relate.

Section 4.6Tenant's Utility Costs. As part of Tenant's Work, the Premises shall be separately metered and/or sub-metered for electrical use, water and sewer services and gas and to the extent that any of such services are separately metered Tenant shall promptly pay all charges therefor to the appropriate public utility; provided, that, until such time as any of such services are so separately metered, Tenant shall promptly pay all of Tenant's Utility Costs as set forth herein. For any electricity, water, sewer and gas services to the Premises that are sub-metered to the Premises and billed by the utility provider to Landlord, Tenant shall pay Tenant's Utility Costs to Landlord as Additional Rent within 15 days after invoice by Landlord. For any electricity, water, sewer and gas services to the Premises that are not separately metered or sub-metered to the Premises, Landlord may reasonably allocate and invoice Tenant's Utility Costs to Tenant and Tenant shall pay such Tenant's Utility Costs to Landlord as Additional Rent within 15 days after invoice by Landlord.

Section 4.7Tenant's Audit Rights. Not more than once a year and within 90 days following the end of each calendar year and upon Tenant's request, Landlord shall furnish Tenant reasonable documentation for the Additional Rent described in Sections 4.3 through 4.6 for the prior calendar year. Upon written request within 90 days following Landlord's supplying Tenant with such reasonable documentation, Tenant, at its sole cost and expense, may review Tenant's applicable records concerning such Additional Rent expenses for the applicable period during reasonable times acceptable to Landlord; however, in no event shall such review be done by any party who is compensated by Tenant on a contingency fee basis. If such examination reveals the Additional Rent reviewed appears to have been overstated by Landlord, Landlord will have an opportunity to review the determination of the same and, if Landlord concurs in the assessment that there has been an error in Landlord's statement resulting in Tenant's overpayment, Landlord shall, at Landlord's option, either give Tenant a credit against the next payment of Additional Rent or pay Tenant the amount overpaid (and, if the Term has ended, Landlord shall pay Tenant the amount overpaid). In the event that the amount of the overpayment due Tenant exceeds by five percent (5%) of the total of the Additional Rent actually due, then Landlord shall reimburse Tenant the reasonable cost of conducting its examination of Landlord's records. In the event that Landlord disputes in writing Tenant's determination of any overpayment and there is not a resolution of such dispute between Landlord and Tenant within 10 days thereafter, Landlord and Tenant agree to use an independent third party accountant to resolve the dispute selected by the parties within 20 days following Landlord's written statement of disagreement with Tenant's determination, and, failing an agreement on the selection of such third party accountant, each party shall select an accountant of its choice with a third accountant selected by the other two and with the dispute resolved by a majority decision reached within 10 days following selection of the accountants, by which decision the parties agree to be bound. In the event that Tenant does not request additional backup information concerning such Additional Rent described in this Section within 90 days after the end of a calendar year or upon requesting such documentation does not request to review Landlord's records within 90 days after the receipt of Landlord's reasonable documentation provided to Tenant, the Tenant shall be deemed to be fully satisfied with the accuracy of such Additional Rent and shall waive any rights to protest the same.

Section 4.8Net Lease. Landlord and Tenant intend that the rent payable under this Lease shall be net Base Rent and Additional Rent to Landlord. Except as otherwise expressly provided herein, Tenant shall pay all costs of every kind relating to the operation, maintenance, repair or replacement of the Premises, without any deduction or offset except as otherwise expressly set forth herein.

## ARTICLE V

## USE OF PREMISES

Section 5.1Permitted Use. Tenant shall use and occupy the Premises only for the Permitted Use.

Section 5.2Restrictions on Use. Tenant shall use the Premises in a careful, safe and proper manner, shall not commit or suffer any waste on or about the Landlord's Property, and shall not make any use of the Landlord's Property which is prohibited by or contrary to any Legal Requirements, or which would cause a public or private nuisance. Tenant, at its own expense, shall obtain any and all permits, approvals and licenses necessary for Tenant's use of the Premises. Tenant shall not overload the floors or other structural parts of the Building; and shall not commit or suffer any act or thing on the Landlord's Property which is illegal, offensive, dangerous, or which unreasonably disturbs other tenants. Tenant shall not do or permit to be done any act or thing on the Landlord's Property which will invalidate or be in conflict with any insurance policies, or which will increase the rate of any insurance, covering the Building. If, because of Tenant's failure to comply with the provisions of this Section or due to any use of the Premises or activity of Tenant in or about the Landlord's Property, the Insurance Costs are increased, Tenant shall pay Landlord the amount of such increase caused by the failure of Tenant to comply with the provisions of this Section. Tenant shall cause any fire lanes located within the Landlord's Property to be kept free of all parking associated with its business or occupancy. Tenant shall conduct its business at all times so as not to annoy or be offensive to other tenants and occupants in the Building. Tenant shall not permit the emission of any objectionable noise or odor from the Premises and shall at its own cost install such extra sound-proofing or noise control systems and odor control systems, as may be needed to eliminate noise, vibrations and odors, if any, emanating from the Premises being heard, felt or smelled outside the Premises. Tenant shall not place any file cabinets bookcases, partitions, shelves or other furnishings or equipment in a location which blocks any windows. Tenant shall have the right to install and use the Back-Up Generator pursuant and subject to the terms and provisions of Exhibit G.

Section 5.3Hazardous Materials. Tenant (a) will not conduct any activity on the Premises that will use or produce any Hazardous Materials, except for such activities that are both (i) part of the ordinary course of Tenant's business activities and (ii) conducted in accordance with all Environmental Laws; (b) will not use the Premises in any manner for the storage of any Hazardous Materials except for storage of such materials that are both (i) used in the ordinary course of Tenant's business and (ii) properly stored in a manner and location satisfying all Environmental Laws; (c) will not install any underground tanks of any type; and (d) will not permit any Hazardous Materials to be brought onto the Premises, except in the ordinary course of Tenant's business and in compliance with all Environmental Laws. If any Hazardous Materials are brought or found on the Premises in violation of the above provisions of this Section, the same shall be immediately removed by Tenant, with proper disposal, and all required cleanup procedures shall be diligently undertaken pursuant to all Environmental Laws. If at any time during or after the Lease Term the Premises are found to be so contaminated or subject to such conditions as a result of Tenant's failure to comply with the foregoing provisions, Tenant shall defend, indemnify and hold Landlord harmless from all claims, demands, actions, liabilities, costs, expenses, damages and obligations of any nature arising from or as a result of the use of the Premises by a Tenant Party. Tenant will maintain on the Premises a list of all materials stored at the Premises for which a material safety data sheet (an "MSDS") was issued by the producers or manufacturers thereof, together with copies of the MSDS's for such materials, and shall deliver such list and MSDS copies to Landlord upon Landlord's request therefor. Except for Hazardous Materials that existed in or on the Premises as of the Commencement Date, Tenant shall remove all Hazardous Materials from the Premises in a manner acceptable to Landlord before the earlier of the date Tenant vacates the Premises and the date Tenant's right to possess the Premises ends. Landlord may enter the Premises and conduct environmental inspections and tests therein as it may require from time to time,

provided that Landlord shall use reasonable efforts to minimize the interference with Tenant's business. Such inspections and tests shall be conducted at Landlord's expense, unless they reveal the presence of Hazardous Materials in violation of the above provisions of this Section or that Tenant has not complied with the requirements of this Section, in which case Tenant shall reimburse Landlord for the cost thereof within 10 days after Landlord's request therefor.

Section 5.4Medical Waste. Tenant hereby agrees to furnish to Landlord within 30 days after receipt of a written request from Landlord, written evidence that Tenant has established a written policy (the "Medical Waste Policy") concerning the identification, collection, storage, decontamination and disposal of hazardous medical waste at the Premises, which Medical Waste Policy shall comply with all applicable Legal Requirements. Tenant covenants that: (a) Tenant's employees, agents and contractors shall not dispose of any hazardous medical waste within the Premises or the Property in a manner which is contrary to applicable Legal Requirements; (b) all such hazardous medical waste will be collected, stored, decontaminated and removed from the Premises and the Property by a qualified party in compliance with all applicable Legal Requirements and guidelines (including, without limitation, the Occupational Safety and Health Act) of any local, state or federal entity having jurisdiction over this matter; and (c) Tenant and its employees, agents and contractors shall at all times employ proper procedures, including, without limitation, the use of tags, signs or other appropriate written communication, to prevent accidental injury or illness to other tenants, occupants or Invitees in the Premises or the Property resulting from Tenant's collection, storage, decontamination and disposal of hazardous medical waste. Tenant hereby covenants and agrees that at all times during the Lease Term, Tenant and its employees, agents and contractors and any third parties at any time occupying or present on the Premises shall adhere to the terms and conditions of the Medical Waste Policy. Tenant agrees to indemnify, defend and hold Landlord, its principals, agents and employees and any mortgagee(s) harmless against and from any and all liabilities, obligations, damages, penalties, claims, costs, charges or expenses, including, without limitation, attorneys' fees, clean-up costs, fines or penalties arising out of or resulting from Tenant's violation of this Section 5.4. For purposes of this Article V, hazardous medical waste shall include, but not be limited to, the following: (i) any potentially infectious materials; (ii) blood and other body fluids in any form (including, without limitation, lab specimens); and (iii) any material contaminated by potentially infectious materials or by blood or other body fluids, including, without limitation, needles, syringes, gloves, linen, uniforms or laundry and cleaning equipment or materials used to clean any of the foregoing.

## ARTICLE VI

## LANDLORD'S SERVICES

Section 6.1Landlord's Services. Landlord shall furnish to the Building the services set forth below in this Section 6.1, subject to the conditions stated in this Lease. The cost of certain of these services are to be (i) paid by Tenant, as provided in this Lease, or (ii) included in Operating Costs, Insurance Costs or Taxes, as applicable.

(a) Building. Landlord shall maintain and keep in good condition and repair the exterior and structure of the Building and mechanical elements of the Building, including the roof and roof structure, and the utility lines and systems outside the Building (except to the extent those utility lines or systems are the property or responsibility of the applicable utility company).

(b) Systems. Subject to Tenant's obligations under Section 7.4, Landlord shall operate, maintain and repair the heating, ventilating and air conditioning system, the plumbing system and the electrical system of the Building (but specifically excluding any supplemental HVAC systems, including, without limitation, the Supplemental HVAC Unit (as defined in Section 7.5(b) below)). Landlord shall provide heating and air conditioning services to the Premises to heat and cool the Premises at temperatures in accordance with ASHRAE standards during Business Hours. If Tenant desires heating or air conditioning services at the Premises at any time other than Business Hours, Landlord shall use reasonable efforts to arrange for such "after hours" heating or air conditioning service, and Tenant shall pay for such service as Additional Rent at a flat rate of $50.00 per hour, subject to adjustment by Landlord from time to time on the basis of changes in Landlord's costs of providing the service.

(c) Water and Sewer. Cold and hot water at standard Building temperatures will be available for ordinary drinking, cleaning, sanitary and lavatory purposes. Until such time as the Premises is separately metered and Tenant is billed directly by the utility provider for water and sewer consumption, if Tenant requires or uses water for any purpose in addition to such ordinary purposes, Landlord may install a water meter at Tenant's expense and thereby measure Tenant's water consumption. Until such time as the Premises is separately metered and Tenant is billed directly by the utility provider for water and sewer consumption, Tenant shall pay Landlord, as Additional Rent, on demand the cost of all water consumption so metered, including without limitation any and all sewer rents, taxes or levies assessed by any governmental authority or utility in connection with metered consumption. Such meter and installation equipment shall be maintained in good working order and repair at Tenant's expense. Any water or sewer services charged directly to other tenants of the Building shall not be included in Operating Costs.

(d) Common Areas. Landlord shall provide heating and air conditioning for the Common Areas inside the Building during Business Hours. Landlord shall clean, provide lighting, repair, maintain and provide janitorial services for the Common Areas including, to the extent reasonable, the Parking Areas, in order to maintain the Common Areas. Notwithstanding the above, any damage to the Common Areas or Common Facilities caused by any of Tenant's Invitees shall be the sole responsibility of Tenant, subject to the provisions of Section 13.5 herein.

(e) Dumpster. Landlord shall provide a dumpster and/or trash compactor in the vicinity of the common loading dock serving the Building for Tenant's use for the disposal of routine trash and rubbish from the Premises (but specifically excluding any Hazardous Materials, medical waste and biomedical materials and waste), the cost of which shall be included in Operating Costs.

(f) Intentionally Deleted.

(g) Taxes. Landlord shall pay all Taxes levied upon or with respect to Landlord's Property.

(h) Insurance. Landlord shall procure and maintain in full force and effect fire, casualty and extended coverage insurance with respect to Landlord's Property, with vandalism and malicious mischief endorsements, liability insurance with respect to the Common Areas, rent loss insurance and such other insurance upon or with respect to Landlord's Property as Landlord determines to be necessary, appropriate and/or desirable or is required by Landlord's lender, all with such limits of coverage as Landlord or Landlord's fender may deem necessary, appropriate and/or desirable.

Section 6.2Extraordinary Use. Tenant acknowledges that the services to be supplied by Landlord will be sufficient only for general office purposes. Any additional capacity or structural support, as determined by Landlord, needed for computers, data processing, medical devices and equipment, or heat-generating machines or other equipment, or uses beyond ordinary office uses, shall be subject to Landlord's prior written approval, which approval shall be in Landlord's sole discretion, and all such equipment shall be installed and maintained at Tenant's sole expense.

Section 6.3Interruption; Delay. Landlord shall have no responsibility or liability for failure or interruption of any such repairs or services referred to in this Article VI, or for any interruption in utility services, caused by breakage, accident, strikes, repairs, inability after exercise of reasonable diligence to obtain supplies or otherwise furnish services, or for any cause or causes beyond the reasonable control of Landlord (but Landlord, in respect of those matters for which Landlord is responsible, will use reasonable efforts to restore such services or make such repairs as soon as possible), nor in any event for any indirect or consequential damages; and failure or omission on the part of Landlord to furnish such service or make such repair shall not be construed as an eviction of Tenant, nor render Landlord liable in damages, nor entitle Tenant to an abatement of Base Rent or Additional Rent, nor release Tenant from the obligation to fulfill any of its covenants under this Lease, except as provided in Articles X and XI with respect to eminent domain and damage by fire or other casualty. If any of such services are interrupted by a cause or causes within the reasonable control of Landlord so as to render the Premises, or a significant portion thereof, untenantable and such interruption of services continues for 4 consecutive Business Days after Tenant

gives Landlord written notice thereof, Tenant shall be entitled to an abatement of Base Rent in proportion to the portion of the Premises rendered untenantable for each day after such fourth Business Day that such untenantable condition continues by reason of such interruption in services.

Section 6.4Additional Services. Should Tenant request any additional services, or services beyond the noted hours for such services, Tenant agrees to pay to Landlord as Additional Rent therefor Landlord's actual costs for providing such service, plus an additional 15% of such costs as an administrative fee, within 15 days of Landlord's billing Tenant therefor.

## ARTICLE VII

## CERTAIN OBLIGATIONS OF TENANT

Section 7.1Rent. Tenant will promptly pay the Base Rent and Additional Rent, including without limitation any and all fees, charges, expenses, fines, assessments or other sums payable by Tenant to Landlord (or to the applicable provider of utilities) at the time and in the manner provided for in this Lease, all of which shall be deemed to be obligations to pay Base Rent or Additional Rent.

Section 7.2Utilities. In addition to electricity, water, sewer and gas services which are the subject of Section 4.6, Landlord reserves the right to cause any or all of Tenant's other utilities to be separately metered or submetered. In the event that Tenant is billed directly by a utility provider, then Tenant shall pay such bills directly to such utility provider prior to their due dates. In the event Tenant's utility usage is separately metered or sub-metered by Landlord, Tenant shall pay the billed charges therefor to Landlord as Additional Rent within 15 days of Landlord's billing therefor. In the event Tenant's utility usage is not separately metered, then, except for Tenant's Utility Costs, Tenant shall pay for such usage as a part of the Operating Costs. Tenant's use of electric current shall never exceed the capacity of existing feeders, risers and wiring installations in the Building. Without limiting the foregoing, Tenant shall not connect to the electrical distribution system anything other than normal office equipment. Tenant shall not make or perform any alterations to wiring, installations, lighting fixtures or other electrical facilities in any manner without the prior written consent of Landlord, which consent shall be in Landlord's sole discretion. Any risers or wiring to meet Tenant's excess electrical requirements, if requested by Tenant and approved by Landlord, will be installed by Landlord at Tenant's expense.

Section 7.3No Waste. Tenant shall not overload, damage or deface the Premises nor shall it suffer or permit the same to be done, nor shall it commit any waste.

Section 7.4Maintenance; Repairs; and Yield-Up.

(a) During the Lease Term and any holdover, Tenant will keep the Premises neat and clean and maintain the same and all improvements thereon in good repair, condition and appearance. Tenant shall, at Tenant's sole cost and expense and in compliance with Landlord's cleaning specifications for the Building, arrange for routine janitorial services for, and rubbish and trash removal from, the Premises (including, without limitation, any restroom facilities therein (if any)). Tenant's obligation to so maintain and repair the Premises shall apply to all of the Premises, including, without limitation, all doors, glass, fixtures, interior walls, floors, ceilings, and any other systems exclusively serving the Premises (including, without limitation, any Supplemental HVAC Unit), including, without limitation, janitorial services and waste removal services. There is excepted from Tenant's obligations under this Section only (i) damage to such portions of the Premises not the responsibility of Tenant under this Lease and originally constructed by Landlord, (ii) repairs and work which are otherwise the specific responsibility of Landlord hereunder and (iii) reasonable wear and tear. Tenant shall maintain in effect throughout the Lease Term, maintenance contracts for any supplemental air conditioning units (including, without limitation, any Supplemental HVAC Unit) or other specialty equipment exclusively serving the Premises and, from time to time upon Landlord's request, provide Landlord with a copy of such maintenance contract and reasonable evidence of its service record. Without limiting the foregoing, Tenant and not Landlord shall be solely responsible for the maintenance and repair of the Premises and all the pipes, wires, conduits, utilities and other installations that serve only the Premises. At the end of the Lease Term or sooner termination of this Lease, and subject

to Section 7.4(b) below, Tenant shall (x) peaceably surrender and deliver up the Premises to Landlord, broom clean, with all utilities safely capped, and in good repair and condition, and, if Landlord so elects in writing at the time such installations, alterations, additions or improvements are approved by Landlord, removing all installations, alterations, additions or improvements in or to the Premises (including, without limitation, any installations, alterations, additions or improvements in or to the Premises as part of the Tenant's Work), and (y) remove all (1) electronic, fiber, phone and data cabling and related equipment that is installed by or for the exclusive benefit of Tenant or any party acting under or through Tenant, (2) signs and lettering, and (3) personal property, goods and effects belonging to Tenant or anyone claiming through or under Tenant, and, in all cases, Tenant shall repair any damage to the Premises or the Building caused by any such removal so the Premises is surrendered to Landlord in the same condition the same was delivered to Tenant in (reasonable wear and tear and casualty and condemnation excepted and subject to the foregoing terms and provisions), all at Tenant's sole cost and expense. Tenant shall cause all maintenance and repair work to conform to applicable Legal Requirements. Tenant shall keep the Premises clear of all filth, trash and refuse and shall be responsible for the removal of all waste from the Premises, including, without limitation, medical waste generated by Tenant, in accordance with applicable Legal Requirements, and in the case of the removal of such medical waste, Tenant shall contract for the removal of such waste with a reputable, bonded and certified vendor and shall notify Landlord in advance of the name of such vendor. Any waste removal services charged directly to other tenants of the Building shall not be included in Operating Costs. If Tenant fails to perform Tenant's obligations under the above provisions of this Section, then Landlord will have the right (but not the obligation), without waiving any default by Tenant, to cause such obligations to be performed upon not less than 3 days prior written notice to Tenant (or a shorter period of prior written notice, or a contemporaneous written notice, if appropriate in Landlord's judgment in light of the nature of Tenant's obligations to be performed), and if Landlord causes any of such obligations to be performed, the costs and expenses reasonably incurred by Landlord in connection therewith, plus the markup provided for in Section 6.4, shall be due and payable by Tenant to Landlord as Additional Rent upon demand.

(b) Without limiting the terms and provisions of Section 7.4(a) above, at the end of the Lease Term or sooner termination of this Lease, Tenant shall clean and otherwise decommission the Premises, including all piping, supply lines, waste lines and plumbing exclusively servicing the Premises and all exhaust or other ductwork exclusively servicing the Premises, which has carried or released any biomedical material or waste or any other Hazardous Materials, so as to permit the report referred to hereinbelow to be issued. Within 30 days after completion of such cleaning and decommissioning, Tenant, at Tenant' expense, shall obtain for Landlord a report addressed to Landlord (and, at Tenant's election, Tenant) by a reputable licensed environmental engineer designated by Tenant and acceptable to Landlord in Landlord's reasonable discretion, which report shall be based on the environmental engineer's inspection of the Premises and shall show that: (i) all biomedical materials and waste and any Hazardous Materials carried or processed by such supply lines, waste lines, and plumbing or released through such exhaust or ductwork, have been removed as necessary so that, should Landlord desire, the Premises, including any such piping, supply lines, waste lines and exhaust or other ductwork, may be disposed of in compliance with applicable Environmental Laws, rules and regulations without taking any special precautions, without incurring special costs or undertaking special procedures for demolition, disposal, investigation, assessment, cleaning or removal and without incurring responsibility for any such biomedical waste or materials or Hazardous Materials or giving any notice in connection therewith; and/or (ii) the Premises may be safely reoccupied for office use and renovated without taking any special precautions for biomedical waste or materials or Hazardous Materials, without incurring special costs or undertaking special procedures for disposal, investigation, assessment, cleaning or removal of biomedical waste or materials or Hazardous Materials and without incurring responsibility for, or being required to give any notice in connection with, biomedical waste or materials or Hazardous Materials.

(c) Annually, Tenant shall provide Landlord with copies of any filings made with and/or notices given to any of the Massachusetts DEP, MWRA or Needham Fire Department that in any way relate to the Premises and/or Tenant's operations and/or disposal of wastes. Additionally, Tenant shall provide Landlord with copies of any notices received from any of the Massachusetts DEP, MWRA or Needham Fire Department that in any way relate to the Premises and/or Tenant's operations and/or disposal of wastes within 10 days following Tenant's receipt thereof. Tenant shall take such actions as are necessary to

maintain the licenses required for its operations and resolve any outstanding violations, if any, from time to time existing, within 30 days following notice of the violation, or such shorter period of time as may be required by applicable Legal Requirements.

Section 7.5Alterations by Tenant.

(a) Tenant will not make any change in, or addition to, the Premises without first obtaining, on each occasion, Landlord's consent in writing as provided below (which consent shall not be unreasonably withheld), and then only at Tenant's expense, and in a lawful manner and upon such terms and conditions as Landlord, by such writing, shall reasonably approve, which shall include, without limitation, (i) maintenance of insurance in form and substance reasonably satisfactory to Landlord, and (ii) compliance with Sections 7.9 and 7.11. Any alteration or addition shall be consistent in appearance with the rest of the Building and the Landlord's Property and shall be made only after duly obtaining (and providing to Landlord copies of) all required permits and licenses from all governmental authorities. Tenant will deliver to Landlord in writing a schedule setting forth the details and location of all such proposed alterations or additions and detailed plans and specifications. The contractor(s) performing the work shall be subject to Landlord's approval, which will not be unreasonably withheld. If required by Landlord's lender, Tenant shall provide a statutory lien bond with respect to such work. All approved repairs, installations, alterations, additions or other improvements made by Tenant shall be made in a good and workmanlike manner, between such hours as approved in writing by Landlord, and in such a way that utilities will not be interrupted and other tenants and occupants of the Building will not suffer unreasonable inconvenience or interference as determined by Landlord. Tenant's Invitees shall be given such reasonable access to other portions of the Building and the mechanical systems as may be necessary or appropriate to perform such work. Both during and after the performance of any such work, Landlord shall have free access to any and all mechanical installations in the Premises, including, but not limited to, air conditioning, fans, ventilating systems, machine rooms and electrical closets; and Tenant shall not construct or permit the installation of partitions and/or other obstructions in the Premises which might interfere with Landlord's free access to the Premises or Building, or impede the free flow of air to and from air vents and other portions of the heating, ventilating and air conditioning systems in the Building. Unless Landlord elects otherwise or has agreed otherwise in writing prior to installation, all installations, alterations, additions or improvements in or to the Premises (including, without limitation, any installations, alterations, additions or improvements in or to the Premises as part of the Tenant's Work) shall be the property of Landlord and shall remain upon, and be surrendered with, the Premises at the end of the Lease Term or sooner termination of this Lease.

(b) Tenant shall have the right to install, at Tenant's sole cost and expense and pursuant to the terms and provisions of this Section 7.5 (including, without limitation, Section 7.5(a) above), a supplemental heating, ventilation and cooling unit to exclusively serve the Premises either within the Premises or on the roof of the Building for Tenant's exclusive use on a 24 hour basis (a "Supplemental HVAC Unit"), subject to Landlord's approval of such Supplemental HVAC Unit and the installation thereof, which approval shall not be unreasonably withheld, conditioned or delayed. In the event that Landlord agrees that Tenant shall be permitted to install a Supplemental HVAC Unit on the roof of the Building, then: (i) Tenant shall not use more than 300 square feet of the Building's usable roof area in connection with its installation and use of such Supplemental HVAC Unit; provided that (x) the location of such 300 square feet of usable roof area shall be in an area of the roof reasonably designated by Landlord, and (y) if such location is in an area of the roof that is visible from any public way, then such Supplemental HVAC Unit shall be adequately screened at Tenant's sole cost and expense in a manner and utilizing materials that are reasonably approved by Landlord; (ii) Tenant's installation and use of such Supplemental HVAC Unit shall not at any time (x) affect the waterproofing of the roof, or (y) cause any interference with (1) the Building's operating or mechanical systems, (2) the operations of any tenant in the Building, (3) any preinstalled telecommunications equipment in or on the Building, or (4) any future equipment on the roof (including, without limitation, any telecommunications, HVAC or emergency generator equipment); and (iii) Tenant shall cooperate with any rooftop management policy and any telecommunications management policy which Landlord may implement for the Building. Tenant shall be responsible, at Tenant's sole cost and expense, to obtain any and all necessary and required permits and approvals from any and all applicable governmental authorities in connection with the installation and use of any Supplemental HVAC Unit and shall (I) at all times comply with any and all such permits and approvals, (II) comply with the provisions of

this Lease, including without limitation, Article VI and this Article VII in connection with its installation of the Supplemental HVAC Unit, and (III) restore the roof to its prior condition upon Tenant's removal of the Supplemental HVAC Unit at the expiration or earlier termination of this Lease in accordance with the terms and provisions of this Lease, including without limitation, Section 7.4 and this Section 7.5. Tenant shall not be charged any Additional Rent as a result of the installation of any such Supplemental HVAC Unit, unless Landlord's insurance increases as a result of such installation or Tenant damages any portion of the Building or the roof in connection with such installation.

Section 7.6Trade Fixtures and Equipment. Any trade fixtures installed in, or attached to, the Premises by, and at the expense of, Tenant shall remain the property of Tenant, if the same may be removed without damage to, or destruction of, the Premises. Tenant shall have the right, at any time and from time to time during the Lease Term, to remove any and all of its trade fixtures, which it may have installed in, or attached to, the Premises, during the Lease Term. In addition, at the end of the Lease Term or sooner termination of this Lease, Tenant shall remove all of Tenant's trade fixtures unless Landlord gives Tenant a written waiver for same. At any time that Tenant removes any of its trade fixtures, Tenant shall promptly repair any damage to the Landlord's Property caused by such removal.

Section 7.7Compliance with Laws. Tenant, in its use of the Premises and at its sole expense, shall comply with all Legal Requirements, including, without limitation, all Legal Requirements related to the use, storage, discharge, release, removal or existence of Hazardous Materials. Tenant shall keep the Premises in a sanitary and safe condition in accordance with all applicable Federal and State laws and the by-laws, rules, regulations and ordinances of the Town of Needham, and in accordance with all directions, rules and regulations of the Health Officer, Fire Marshall, Building Inspector and other proper officers of the governmental agencies having jurisdiction thereover.

Section 7.8Contents at Tenant's Risk. All inventory, equipment, goods, merchandise, furniture, fixtures and property of every kind which may be on or about the Premises shall be at the sole risk and hazard of Tenant, and if the whole or any part thereof shall be destroyed or damaged by fire, water or otherwise, or by the use or abuse of water or by the leaking or bursting of water pipes, or by rising water, or by roof or other structural leak, or by loss of electrical service, or in any other way or manner, no part of such loss or damage shall be charged to or borne by Landlord in any case whatsoever, except that to the extent required by applicable Massachusetts law, the foregoing shall not exculpate the Landlord from its own negligent acts or omissions. Tenant shall maintain full and adequate insurance coverage on all of its property at the Premises and in the remainder of the Building, including physical damage, theft and business interruption insurance, or Tenant shall be a self-insurer thereof, in which case Tenant shall so advise Landlord in writing and shall be fully responsible for all such damage, and shall indemnify and save harmless Landlord from any loss, cost, expense, damage or liability resulting from Tenant's failure to have such insurance as required in this Lease. Such insurance on Tenant's property shall contain a waiver of subrogation clause in favor of Landlord, or shall name Landlord as an additional insured for the sole purpose of preventing a subrogation claim against Landlord. If Tenant is a self-insurer, in whole or in part, Landlord shall be entitled to the same benefits it would have enjoyed had insurance covering the loss in full with a waiver of subrogation clause been in effect, or as if the Landlord has been named on insurance covering the loss in full as an additional insured for the purpose of preventing a subrogation claim.

Section 7.9Exoneration: Indemnification and Insurance. Subject to the provisions of Section 13.5 herein, Tenant will exonerate, indemnify, defend, save and hold harmless Landlord (and any and all Persons claiming by, through or under Landlord) from and against all claims, proceedings, defenses thereof, liabilities, costs, and expenses of any kind and nature, including legal fees, arising from: (i) any breach of this Lease by Tenant or any of Tenant's Invitees or other Person claiming by, through or under Tenant; and/or (ii) any act, omission or negligence of any of Tenant's Invitees, or arising from any accident, injury or damage occurring in, on or about the Landlord's Property, which such accident, damage or injury results or is claimed to have resulted from the negligence or misconduct on the part of any of Tenant's Invitees. This exoneration, indemnification and hold harmless agreement shall survive the termination of this Lease.

Landlord agrees that it will protect and save and keep Tenant forever harmless and indemnified against and from any and all penalties, damages, fines, causes of action, liabilities, judgments, expenses (including, without limitation, attorneys' fees) or charges incurred in connection with any claim against Tenant arising from any injury to any person occurring at the Premises or Landlord's Property, to the extent such injury results from the negligence of Landlord or Landlord's employees; provided, however that in no event shall the aforesaid indemnity render Landlord responsible or liable for any loss or damage to fixtures or personal property of Tenant and Landlord shall in no event be liable for any indirect or consequential damages.

From and after any pre-term occupancy by Tenant, if any allowed by Landlord, and thereafter during the Lease Term and any period of holding over, Tenant shall maintain in full force and effect a policy of commercial general liability insurance under which Landlord (and its designees) and Landlord's mortgagee(s), loss payee(s), lenders loss payee(s) are named as additional insureds. This policy to be written on ISO Commercial General Liability Coverage Form CG 00 01 (12 07) edition date or equivalent. Any endorsement to the policy should not in any way restrict the premises/operations, personal injury/advertising injury, product liability/completed operations, and contractual liability coverage that is provided in the above form. Each such policy shall be non-cancelable with respect to Landlord without 30 days prior written notice to Landlord, and Tenant shall deliver to Landlord prior to any pre-term occupancy and thereafter at least 30 days prior to the expiration of any then effective coverage a satisfactory written certificate of insurance coverages in the exact form attached hereto as Exhibit I or the renewal or replacement of such coverages. The minimum limits of liability of such insurance shall be $1,000,000 combined single limit for bodily injury and property damage, each occurrence, and $2,000,000 general aggregate limit, together with an overall umbrella liability limit of $2,000,000. Tenant shall not permit any contractor to do any work at or furnish any materials to be incorporated into the Premises without first delivering to Landlord satisfactory evidence of the Contractor's commercial general liability insurance, worker's compensation insurance, automobile insurance and, if required by Landlord's lender, statutory lien bonds, each reasonably acceptable to Landlord and complying with any insurance specifications provided by Landlord. All insurance requirements imposed upon Tenant or its contractors under this Lease shall be subject to the further requirement that the forms of coverage and all companies providing insurance coverage should be licensed in the Commonwealth of Massachusetts, be in sound financial condition, maintain an A.M. Best rating of A- or better, and be reasonably acceptable to Landlord.

Tenant agrees that Landlord shall not be responsible or liable to Tenant, or to those Persons claiming by, through or under Tenant, for any loss or damage that may be occasioned by or through the acts or omissions of Persons occupying or using adjoining premises or any part of the Landlord's Property, or otherwise, or for any loss or damage resulting to Tenant or those Persons claiming by, through or under Tenant, or its or their property, except that the foregoing shall not exculpate the Landlord from acts of its own negligence.

Section 7.10Landlord's Access. Landlord and its representatives shall have the right without charge to it and without reduction in Base Rent or Additional Rent, at reasonable times and upon reasonable prior notice (which may be by electronic mail or telephone), except in the case of an emergency (in which case such prior notice shall not be required), and in such manner as shall not unreasonably interfere with Tenant's business, to enter the Premises for any reasonable purpose (including, without limitation, showing the Premises to prospective purchasers, tenants and lenders) and to make entry for the purpose of investigating repair or maintenance problems and to make such repairs or changes as Landlord deems advisable, and to maintain, use, repair, replace, relocate or introduce pipes, ducts, wires, meters and any other Landlord's fixtures serving or to serve the Premises or other parts of the Landlord's Property (which shall be installed above ceilings, behind walls, along existing columns, or in other areas which do not interfere with Tenant's business), or to maintain or repair any portion of the Landlord's Property, and, in case of an emergency, whether resulting from circumstances in the Premises or elsewhere on the Landlord's Property, Landlord or its representatives may enter the Premises (forcibly, if necessary) at any time to take such measures as may be needed to cope with such emergency. Such access shall include, but not be limited to, the right to open floors, walls, ceilings, and building systems for the foregoing purposes. During the last 12 months of the Lease Term, Landlord shall have the right to place signs at and about the Premises (including but not limited to in any exterior window of the Premises and on the exterior of and outside the Building), advertising the Premises as being available for lease.

Notwithstanding the foregoing or any other provision contained in this Lease or the Rules and Regulations, Landlord agrees to use all commercially reasonable and diligent precautions when accessing any area of the Premises that is reasonably likely to contain health information that is protected by the HI PAA Privacy Rule, 45 CFR Part 160 and Subparts A and E of Part 164, as amended from time to time, or any other laws enacted to protect individuals' medical records and other personal health information (collectively, "Privacy Laws"). Landlord must at all reasonable times (including in the event of repossession of the Premises by Landlord), provide Tenant with reasonable access to all patient medical records. Landlord acknowledges that any security interest granted to Landlord in this Lease (or any related agreement) specifically excludes Tenant's patient medical records. This paragraph shall supersede any other conflicting provision in this Lease, or any other agreement entered into by Landlord and Tenant as part of this transaction.

Section 7.11No Liens. Tenant shall not permit any mechanics', laborers' or materialmen's liens to stand against the Landlord's Property or Tenant's interests in the Premises, this Lease, or the estate created hereby for any labor or materials furnished to Tenant or claimed to have been furnished to Tenant in connection with work of any character performed or claimed to have been performed in or on the Premises by or at the direction or sufferance of Tenant. Landlord may condition the right of Tenant to do Tenant's work or to do any other work which could result in a lien upon the Landlord's Property or Tenant's interests in the Premises, this Lease, or the estate created hereby on the delivery and recording of statutory lien bonds (if required by Landlord's lender) or indemnities satisfactory to Landlord.

Section 7.12Compliance with Rules and Regulations. Landlord has adopted the Rules and Regulations as attached hereto as Exhibit E. Landlord may from time to time promulgate and revise the Rules and Regulations. Tenant covenants that all of Tenant's invitees will comply with the Rules and Regulations and all such rules and regulations in effect from time to time. Landlord shall enforce such rules and regulations, if at all, in a non-discriminatory manner.

## ARTICLE VIII

## SUBLETTING AND ASSIGNMENT

Section 8.1Subletting and Assignment.

(a) Except as hereinafter set forth, Tenant shall not assign, mortgage, pledge or encumber this Lease nor sublet all or any part of the Premises, nor permit or allow the use of all or any part of the Premises by third party users, such as concessionaires, without, on each occasion, obtaining Landlord's written consent thereto, which consent may be granted, conditionally granted or withheld in Landlord's reasonable discretion. As used herein, the term "assign" or "assignment" shall be deemed to include, without limitation: (i) any transfer of Tenant's interest in this Lease by operation of law or the merger or consolidation of Tenant with or into any other firm or corporation; or (ii) the transfer or sale of a controlling interest in Tenant (whether in a single transaction or a series of transactions) and whether by sale of its capital stock or otherwise.

(b) (i) Notwithstanding anything to the contrary in Section 8.1(a), Landlord will not unreasonably withhold or delay its consent to any sublease of all or any part of the Premises, and Landlord will consent to any sublease of all of the Premises to a Permitted Transferee, so long as, in either event, (A) the sublease will not violate the terms of any agreement, instrument, law, rule, regulation or requirement which is binding upon Landlord and/or the Landlord's Property; (B) the subtenant's proposed use is permitted under the terms of this Lease; (C) the subtenant is qualified to do business in the Commonwealth of Massachusetts and has all applicable permits and licenses to do business from the Premises; (D) Tenant pays to Landlord all of Landlord's reasonable expenses arising out of such sublease, including, without limitation, reasonable attorneys' fees; (E) there does not then exist an Event of Default and no Event of Default will be created as a result of the proposed sublease or the proposed use by the subtenant; (F) there are no subtenants in occupancy of the Premises or portions thereof; and (G) the proposed sublease prohibits any assignment of the sublease or any sub-sublease of any portion of the Premises without the prior written consent of Landlord, which Landlord will not unreasonably withhold or delay.

(i) Notwithstanding anything to the contrary in Section 8.1(a), Landlord will consent to an assignment of this Lease to a Permitted Transferee, so long as: (1) the Permitted Transferee assumes this Lease pursuant to a document satisfactory to Landlord; (2) the assignee is qualified to do business in the Commonwealth of Massachusetts and has all applicable permits and licenses to do business from the Premises; (3) Tenant pays to Landlord all of Landlord's reasonable expenses arising out of such assignment, including, without limitation, reasonable attorneys' fees; (4) there does not then exist an Event of Default and no Event of Default will be created as a result of the proposed assignment or the proposed use by the assignee; (5) the successor to Tenant has a net worth, computed in accordance with generally accepted accounting principles consistently applied, at least equal to the greater of (i) the tangible net worth of Tenant immediately prior to such merger, consolidation or transfer, or (ii) the tangible net worth of Tenant herein named on the date of this Lease; and (6) each of Landlord's mortgagees has consented to such assignment if such mortgagee's consent is required pursuant to the terms of the applicable financing documents.

(c) In the event of any permitted assignment of this Lease or sublease of all or any part of the Premises by Tenant, Tenant shall be jointly and severally liable with the new tenant for the payment of any and all Base Rent and Additional Rent which may become due by the terms of this Lease and for the performance of all covenants, agreements and conditions on the part of Tenant to be performed hereunder. Tenant shall also pay to Landlord 50% of any rent received as a result of the assignment or sublease which exceeds the Base Rent and Additional Rent payable hereunder on a per square foot basis, after taking into account the costs of the assignment or sublease amortized on a straight-line basis over the remaining Lease Term. No such assignment or sublease shall be valid or effective unless and until (i) the new tenant and Tenant execute and deliver to Landlord an agreement, in form and substance reasonably satisfactory to Landlord, pursuant to which inter alia, such new tenant (A) assumes all of the obligations of Tenant under this Lease, (B) if a sublease, agrees to execute and deliver such estoppel certificates and subordination agreements in the same forms as Landlord may require of Tenant under this Lease, (C) if a sublease, acknowledges that Landlord has no obligations to new tenant under this Lease, the sublease or otherwise and (D) agrees to maintain the same insurance coverages as the insurance coverages which Tenant is required to maintain under this Lease and to provide evidence thereof to Landlord in accordance with the terms of this Lease; and (ii) the new tenant delivers to Landlord evidence of the insurance coverages required to be maintained by such new tenant under the agreement referenced in clause (i) above. No modification of the terms of this Lease or any course of dealing between Landlord and any assignee or sublessee of Tenant's interest herein shall operate to release or impair Tenant's obligations hereunder.

(d) Notwithstanding anything to the contrary contained in this Article VIII or other provisions of this Lease, in the event that Tenant seeks Landlord's consent to an assignment of this Lease, other than to a Permitted Transferee, or a sublease of 50% or more of the Premises, other than to a Permitted Transferee, Landlord, at its option, may terminate this Lease (or if the request is for a sublease of less than all of the Premises, at Landlord's option, Landlord may terminate this Lease as to the portion requested to be sublet and Landlord and Tenant shall execute an amendment to this Lease to modify the Premises and to adjust Base Rent and Tenant's Share based upon the approximate remaining leasable square footage to the Leasable Square Footage of the Building). In such an event, Landlord may enter into a new lease with the proposed assignee or sublessee or any other party on any terms and provisions acceptable to Landlord in Landlord's sole discretion for the Premises or the portion of the Premises released from this Lease. Notwithstanding the above provisions of this Section 8.1(d) to the contrary, if Landlord exercises its option to terminate this Lease in whole or in part under this Section 8.1(d), Tenant may, by written notice given to Landlord within 3 Business Days after Landlord exercises such option, withdraw Tenant's request for Landlord's consent to the subject assignment or sublease, in which event this Lease shall not terminate.

(e) Any sublease of all or any portion of the Premises and any assignment of this Lease shall be made, if at all, only through The Bulfinch Companies, Inc., as broker. Tenant shall pay a market rate commission to The Bulfinch Companies, Inc. for any such sublease or assignment. Tenant shall not offer or solicit offers for all or any portion of the Premises for sublease or for assignment of this Lease other than through The Bulfinch Companies, Inc.

## ARTICLE IX

## RIGHTS OF MORTGAGEES AND GROUND LESSORS; ESTOPPEL CERTIFICATES

Section 9.1 Subordination to Mortgages and Ground Leases. This Lease is and shall be and remain subordinate to the lien of any present or future mortgage or mortgages, or ground lease, upon the Landlord's Property, irrespective of the time of execution or time of recording of any such mortgage or mortgages, or ground lease, and to all renewals, extensions, and modifications therefor or amendments thereto; provided that as a condition to such subordination to any present or future mortgage or ground lease, the mortgagee or ground lessor must agree not to disturb Tenant's possession of the Premises pursuant to the terms of this Lease so long as no Event of Default exists. Tenant will, upon 10 Business Days' advance written request from Landlord or any holder of a mortgage on all or a portion of the Landlord's Property or the ground lessor thereof, execute, acknowledge, and deliver any and all instruments reasonably deemed necessary or desirable by Landlord, or such holder to give effect to, or notice of, such subordination, provided that such subordination includes a non-disturbance agreement for the benefit of Tenant on commercially reasonable terms and conditions specified by the mortgagee or ground lessor. Upon 10 Business Days' written request from Landlord, any holder of a mortgage or ground lease on the Landlord's Property or any successor in interest to Landlord, whether by purchase, foreclosure, deed in lieu of foreclosure or otherwise, Tenant shall enter into an attornment agreement, in the form requested by such party, with such party.

Section 9.2 Lease Superior at Mortgagee's or Ground Lessor's Election. At the request in writing of any mortgagee, or ground lessor, of the Landlord's Property, this Lease shall be deemed superior to such mortgage, or ground lease, whether this Lease was executed before or after such mortgage, or ground lease, and Tenant shall execute such documents to effect the foregoing in recordable form as such mortgagee, or ground lessor, shall request.

Section 9.3 Notice to Mortgagee and Ground Lessor. Upon receipt of a written request from Landlord or any holder of a mortgage, on all or any part of the Landlord's Property, or the ground lessor thereof, Tenant will thereafter send any such holder copies of all notices (including, but not limited to, notices of default or termination) given by Tenant to Landlord in accordance with any provision of this Lease. In the event of any failure by Landlord to perform, fulfill or observe any agreement by Landlord herein or any breach by Landlord of any representation or warranty of Landlord herein, any such holder may at its election cure such failure or breach for and on behalf of Landlord within 15 Business Days after the time provided herein for Landlord to cure the same or such longer period as may be reasonably necessary to cure the default. In the event of any inconsistency between this Section and any similar provision in a Subordination, Non-Disturbance and Attornment Agreement entered into by Tenant and any mortgagee or ground lessor, the provisions of the Subordination, Non-Disturbance and Attornment Agreement shall be controlling.

Section 9.4 Limitations on Obligations of Mortgagees. Ground Lessors and Successors. The holder of a mortgage or ground lease or any successor-in-interest to any of them or to Landlord shall not be: (a) bound by any payment of an installment of Base Rent or Additional Rent which may have been made more than 30 days before the due date of such installment; (b) bound by any amendment or modification to this Lease made without the consent of the holder of a mortgage or ground lease or such successor in interest; (c) liable for any previous act or omission of Landlord (or its predecessors in interest); (d) responsible for any monies owing by Landlord to the credit of Tenant or subject to any credits, offsets, claims, counterclaims, demands or defenses which Tenant may have against Landlord (or any of its predecessors in interest); (e) bound by any covenant to undertake or complete any construction of the Premises or any portion thereof; or (f) obligated to make any payment to Tenant other than any security deposit actually delivered to holder of a mortgage or ground lease or such successor in interest. Further,

Tenant will not seek to terminate this Lease by reason of any act or omission of Landlord until Tenant shall have given written notice of such act or omission to the holder of such mortgage or ground lease (at such holder's last address furnished to Tenant) and following the giving of such notice such holder shall have the right, but shall not be obligated, to remedy such act or omission within 20 Business Days after the time period provided for in this Lease for Landlord to cure the same or such longer period as may be reasonably necessary to cure the same. In the event of any inconsistency between this Section and any similar provision in a Subordination, Non-Disturbance and Attornment Agreement entered into by Tenant and any mortgagee or ground lessor, the provisions of the Subordination, Non-Disturbance and Attornment Agreement shall be controlling.

Section 9.5 Estoppel Certificate By Tenant and Information Concerning Tenant. Tenant shall, at any time and from time to time, within 10 days after written request by Landlord or any holder of a mortgage on all or a portion of the Landlord's Property or the ground lessor thereof, (a) execute, acknowledge and deliver to Landlord and any mortgagee or ground lessor a statement in writing certifying that (except as may be otherwise specified by Tenant): (i) this Lease is presently in full force and effect and unmodified; (ii) Tenant has accepted possession of the Premises; (iii) any improvements required by the terms of this Lease to be made by Landlord have been completed to the satisfaction of Tenant; (iv) no rent under this Lease has been paid more than 30 days in advance of its due date; (v) the addresses for notices to be sent to Tenant is as set forth in this Lease or as specified in such certificate; (vi) Tenant as of the date of executing the certificate has no charge, lien or claim of offset under this Lease, or otherwise, against rents or other charges due or to become due hereunder; (vii) Tenant is not in default under this Lease; (viii) to the best of Tenant's knowledge, Landlord is not in default of this Lease; and (ix) such other information as Landlord may reasonably request about this Lease or Tenant's occupancy; and (b) deliver copies of Tenant's most recent annual financial statements (audited if available) to Landlord and such holder or ground lessor.

## ARTICLE X

## CASUALTY

Section 10.1 Damage From Casualty.

(a) If any portion of the Premises or the Building affecting Tenant's use of the Premises is damaged by fire or other casualty, Tenant shall give Landlord written notice of such casualty promptly after Tenant becomes aware of such casualty. Within 60 days after Tenant gives Landlord written notice of such casualty, Landlord shall reasonably estimate, and give Tenant written notice of, the period commencing with the date of such notice (the "Restoration Period") that Landlord anticipates will be reasonably required to perform the restoration work which is the responsibility of Landlord as provided below. If Landlord reasonably estimates that the Restoration Period will be longer than 210 days, then either Landlord or Tenant may terminate this Lease by giving to the other written notice of termination within 10 days after Landlord gives Tenant written notice of such estimate. Such notice of termination shall be effective on the date thereof, and if Tenant is then occupying the Premises, Tenant shall thereafter have a reasonable period of time in which to vacate the Premises. If (i) Landlord reasonably estimates that the Restoration Period will be 210 days or shorter, or (ii) Landlord reasonably estimates that the Restoration Period will be longer than 210 days but neither Landlord nor Tenant exercises its right to terminate this Lease as set forth above, then this Lease shall not terminate; and in such event, Landlord shall, unless Landlord exercises its termination right pursuant to Section 10.3, with reasonable dispatch, repair or rebuild so much of the Premises as were originally constructed by Landlord to substantially their condition immediately prior to the casualty (subject, however, to Legal Requirements then in existence), and Tenant shall concurrently (to the extent practical and consistent with good construction practices) (i) repair and restore so much of the Premises as were constructed by Tenant or are the responsibility of Tenant under this Lease and (ii) repair and restore its fixtures and personal property.

(b) If, pursuant to Section 10.1(a), Landlord is required to restore the Premises and Landlord fails to substantially complete such restoration within 15 days after the end of the Restoration Period (subject to extension for delays described in Section 10.1(c)), then Tenant shall have the right to terminate this Lease upon 15 days prior written notice to Landlord. If Landlord fails to substantially complete such restoration work within such 15 day period, then this Lease shall terminate as of such 15th day.

(c) Landlord shall not be responsible for any delay in commencement of restoration which may result from delays in adjustment or collection of insurance proceeds to the extent such delays are beyond Landlord's reasonable control. Notwithstanding any other provisions of this Section 10.1 to the contrary, Landlord shall not be obligated to commence repair or restoration work prior to receipt of sufficient insurance proceeds, nor shall Landlord be required to expend sums in excess of "net recovered insurance proceeds". The term "net recovered insurance proceeds" shall mean the amount of any insurance proceeds actually recovered by Landlord, less the cost of obtaining the same (including attorneys' fees and appraisal fees) and less the amount thereof required to be paid to a mortgagee or ground lessor.

Section 10.2Abatement of Rent. In the event that the provisions of Section 10.1 shall become applicable, the Base Rent and Additional Rent shall be abated or reduced proportionately during any period in which, by reason of any such damage or destruction, there is substantial interference with the operation of the business of Tenant in the Premises, having regard to the extent to which Tenant may be required to discontinue its business in the Premises, and such abatement or reduction shall continue (but may be adjusted from time to time based on the extent of the interference with Tenant's operations) for the period commencing with such destruction or damage and ending with the substantial completion by Landlord of such work, repair and/or reconstruction as Landlord may do.

Section 10.3Right to Terminate. Notwithstanding the foregoing, Landlord may terminate this Lease following: (a) damage or destruction to the Premises to the extent of 30% or more of the cost of replacement thereof; or (b) the refusal of the applicable insurance carrier to pay funds sufficient for the cost to repair or replace or the refusal of any applicable mortgagee or ground lessor to release the insurance proceeds for such purposes. Landlord may exercise the right to so terminate this Lease by written notice to Tenant given within 60 days after the date of the damage or 60 days after the date Landlord receives written notice of such damage, whichever is later. Such notice of termination shall be effective on the date thereof.

## ARTICLE XI

## EMINENT DOMAIN

Section 11.1Eminent Domain: Right to Terminate and Abatement in Rent. If the Premises or any part thereof or the whole or any substantial part of Landlord's Property, shall be taken, or if a conveyance shall be made in anticipation thereof, for any street or other public use, by action of the municipal, state, federal or other authorities, or shall receive any substantial direct or consequential damage for which Landlord or Tenant shall be entitled to compensation by reason of anything lawfully done in pursuance of any public authority, after the execution hereof and before the expiration of the Lease Term, then this Lease and the Lease Term shall terminate at the election of Landlord (given by written notice to Tenant within 90 days of the taking or within 90 days of notice of the taking to Landlord), and such election may be made in case of any such taking notwithstanding the entire interest of Landlord may have been divested by such taking; and if Landlord does not so elect, then in case of any such taking or destruction of, or damage to, the Premises, rendering the same or any part thereof unfit for use and occupation, a just proportion of the Base Rent hereinbefore reserved according to the nature and extent of the injury sustained by the Premises as determined by Landlord, shall be suspended or abated until the Premises or, in case of such taking, what may remain thereof, shall have been put in proper condition for use and occupation. To the extent that the Premises, upon having been put in proper condition for use and occupation are smaller, the Base Rent hereinbefore reserved shall be reduced for the balance of the Lease Term in the same proportion which the reduction in space bears to the original Leasable Square Footage of the Premises. In the event of a taking of any portion of the Building, the Tenant's Share shall be recomputed.

Section 11.2Restoration. If this Lease is not terminated as provided in Section 11.1, Landlord shall apply so much of the available proceeds of the eminent domain award as are required to restore Landlord's Property and the Premises to a condition, to the extent practical, substantially the same as that immediately preceding the taking, but subject to zoning laws and building codes then in existence. If the available proceeds of the eminent domain award are insufficient, in Landlord's judgment, for that purpose, Landlord shall have no obligation to expend funds in excess of said proceeds and Landlord shall have the right to select which portions of Landlord's Property, if any, shall be restored. The term "available proceeds" shall mean the amount of the award paid to Landlord, less cost of obtaining the same (including attorneys' fees and appraisal fees) and less the amount thereof required to be paid to a mortgagee or ground lessor. In the event Landlord fails to commence restoration of the Landlord's Property and/or the Premises within 60 days after the taking, Tenant shall have the right to terminate the Lease upon 60 days' prior written notice to Landlord.

Section 11.3Landlord to Control Eminent Domain Action. Landlord reserves all rights to compensation for damage to the Premises or any part thereof, or the leasehold hereby created, heretofore accrued or hereafter to accrue, by reason of any taking for public use of said Premises or any portion thereof, or right appurtenant thereto, or privilege or easement in, through, under or over the same, and by way of confirmation of the foregoing Tenant hereby assigns all rights to such damages heretofore accrued or hereafter accruing during the Lease Term to Landlord. Provided, however, nothing herein contained shall limit Tenant's right to any separate award for the taking of personal property, moving expenses, or other items the payment of which shall not reduce the award payable to Landlord.

## ARTICLE XII

## DEFAULT AND REMEDIES

Section 12.1Event of Default. As used herein, "Event of Default" shall mean the occurrence and/or existence of any one or more of the following: (a) Tenant shall neglect or fail to pay Base Rent or any installment thereof, or Additional Rent or, as applicable, any installment thereof within 5 days after due; or (b) Tenant shall neglect or fail to perform or observe any of the other covenants or undertakings herein on its part to be performed or observed and such neglect or failure shall continue for 10 days after notice to Tenant; provided that if the default is other than a default under clause (a) above, or clauses (c) through (i) below, and is such that it cannot be cured within 10 days, but is capable of being cured, such 10 day period shall be extended for a reasonable period of time provided that Tenant commences to cure such default within said 10 day period, continues to do so diligently, and thereafter completes such cure within not more than 60 days following the notice of default; or (c) there is filed by Tenant any case, petition, proceeding or other action under any Bankruptcy Law; or (d) any other proceedings shall be instituted against Tenant under any Bankruptcy Law and not be dismissed within 60 days; or (e) Tenant shall execute an assignment of its property for the benefit of its creditors; or (f) a receiver, custodian or other similar officer for Tenant shall be appointed and not be discharged within 60 days; or (g) the estate hereby created shall be taken by execution or by other process of law and is not redeemed by Tenant within 30 days thereafter; or (h) an assignment or sublease in violation of the terms of this Lease; or (i) Tenant breaches the Financial and Net Worth Requirements under Section 13.13 and within 120 days of such breach, Tenant does not either (1) cure the breach, (2) increase the Security Deposit to an amount equal to 12 months' Base Rent, (3) provide Landlord with a guarantor of its obligations under this Lease pursuant to Landlord's standard and customary guaranty that meets the Financial and Net Worth Requirements, or (4) provide Landlord other security substantially equivalent to the security provided pursuant to the provisions of clauses (2) or (3) of this subsection (i) as reasonably determined by Landlord; or co any other event constituting an Event of Default under other Sections of this Lease, including, without limitation, Section 2.5. If, as provided above, Landlord is responsible for collecting rent via electronic funds transfer, then Tenant, other than having inadequate funds, will not be subject to default for any errors or omissions by Landlord or Landlord's bank.

Section 12.2Landlord's Remedies.

(a) Upon the occurrence of an Event of Default and after the lapse of any applicable period of cure, Landlord may, immediately or at any time thereafter (notwithstanding any license or waiver of any former breach or waiver of the benefit hereof, or consent in a former instance), and without demand or notice, in person or by agent or attorney, enter the Premises or any part thereof and repossess the same as of its former estate, and/or, by written notice to Tenant, terminate Tenant's right to possession under this Lease without terminating this Lease or terminate this Lease, and in any such event expel Tenant and those claiming through or under it and remove their effects (forcibly, if necessary) without being deemed guilty of any manner of trespass and without prejudice to any remedy which might otherwise be used for arrears of Base Rent or Additional Rent or breach of covenant and Tenant shall remain liable for damages as hereinafter set forth in this Article XII. Whether or not Landlord shall have terminated this Lease or Tenant's right to possession, Landlord, in addition to all other remedies which it may have at law or equity, and not in limitation thereof, shall have the remedies provided in this Article XII.

(b) If, pursuant to Section 12.2(a), Landlord terminates Tenant's right of possession of the Premises without terminating this Lease, then Tenant shall pay to Landlord during the remainder of the Lease Term the Base Rent and Additional Rent in installments as and when the same become due and payable, subject to reduction by any rent actually received by Landlord as a result of a re-letting of the Premises (net of the reasonable and customary costs of re-letting, including remodeling costs, brokerage commissions and reasonable attorneys' fees). Landlord shall exercise commercially reasonable efforts to re-let the Premises to mitigate damages, and Landlord may re-let the Premises or any part or parts thereof, either in the name of Landlord or otherwise for a term or terms which may, at Landlord's option, be less than or exceed the period which would otherwise have constituted the balance of the Lease Term and may grant concessions or free rent. The marketing of the Premises in a manner similar to the manner in which Landlord markets other premises within Landlord's control within the Building shall be deemed to have satisfied Landlord's obligation to use "reasonable efforts" hereunder. In no event shall Landlord be required to (i) solicit or entertain negotiations with any other prospective tenant for the Premises until Landlord obtains full and complete possession of the Premises (including, without limitation, the final and unappealable legal right to relet the Premises free of any claim of Tenant), (ii) relet the Premises before leasing other vacant space in the Building, or (iii) lease the Premises for a rental less than the current fair market rent then prevailing for similar office space in the Building. The good faith failure of Landlord to re-let the Premises or any part or parts thereof, or, if the Premises are re-let, the good faith failure to collect the rents due under such re-letting, shall not release or affect Tenant's liability for damage so long as Landlord does not act arbitrarily or capriciously. Any suit brought to collect the amount of the deficiency for any month or other period shall not prejudice in any way the right of Landlord to collect the deficiency for any subsequent month or period by a similar proceeding. Landlord, at Landlord's option, may make such alterations, repairs, replacements and decorations on the Premises as Landlord in Landlord's sole but good faith business judgment considers advisable and necessary for the purpose of re-letting the Premises, and the making of such alterations or decorations shall not operate or be construed to release Tenant from liability hereunder.

(c) If, pursuant to Section 12.2(a), Landlord terminates this Lease, Tenant shall forthwith pay to Landlord as damages, in addition to all sums which were due prior to the date of such termination, a sum equal to the amount by which the Base Rent and Additional Rent for the remainder of the Lease Term exceeds the fair rental value of the Premises for the remainder of the Lease Term, discounted to present value using a then market rate of interest as reasonably determined by Landlord. For the purposes of computing damages payable pursuant to this Section 12.2(c), the Additional Rent with respect to Taxes, Insurance Costs and Operating Costs for the remainder of the Lease Term will be assumed to be the product of such Additional Rent for the most recently ended fiscal, calendar or lease year, as the case may be, times the number of years remaining of the Lease Term. For the purposes of this Article, if Landlord elects to require Tenant to pay liquidated damages in accordance with this Section 12.2 the total rent shall be computed by assuming the Tenant's Share of Taxes, Tenant's Share of Operating Expenses and Tenant's Share of Insurance Costs under this Lease to be the same as were payable for the twelve (12) calendar months (or if less than twelve (12) calendar months have been elapsed since the date hereof, the partial year) immediately preceding such termination of re-entry.

(d) Tenant shall be responsible to Landlord for all expenses which Landlord may incur in connection with the enforcement of Landlord's rights after an Event of Default, including, without limitation, reasonable legal expenses, attorneys' fees, brokerage fees, and the cost of putting the Premises in good order or preparing the same for rental.

(e) Tenant, for itself and any and all persons claiming through or under Tenant, including its creditors, upon the termination of this Lease and of the term of this Lease in accordance with the terms hereof, or in the event of entry of judgment for the recovery of the possession of the Premises in any action or proceeding, or if Landlord shall enter the Premises by process of law or otherwise, hereby waives any right of redemption provided or permitted by any statute, law or decision now or hereafter in force, and does hereby waive, surrender and give up all rights or privileges which it or they may or might have under and by reason of any present or future law or decision, to redeem the Premises or for a continuation of this Lease for the term of this Lease hereby demised after having been dispossessed or ejected therefrom by process of law, or otherwise.

Section 12.3Reimbursement of Landlord. Upon the occurrence of an Event of Default, Tenant will, in addition to paying Landlord all amounts due under the terms and provisions of this Lease, including, without limitation, Section 12.9, reimburse Landlord for all reasonable expenses incurred by Landlord in collecting such rent or in obtaining possession of, or in re-letting the Premises, or in defending any action, including expenses for reasonable counsel fees and commissions. If on termination of this Lease by expiration or otherwise, Tenant shall fail to remove any of its property from the Premises as provided for herein, Landlord shall be authorized, in its sole option, and in Tenant's name and on its behalf, either (a) to cause such property to be removed and placed in storage for the account and at the expense of Tenant; or (b) to sell such property at public or private sale, with or without notice, and to apply the proceeds thereof, after the payment of all expenses of removal, storage and sale, to the indebtedness, if any, of Tenant to Landlord, the surplus, if any, to be paid to Tenant. All sums payable by Tenant under this Article XII shall be deemed Additional Rent.

Section 12.4Landlord's Right to Perform Tenant's Covenants. If Tenant shall at any time fail to make any payment or perform any other act on its part to be made or performed as in this Lease provided, Landlord, in its sole discretion may after due notice to, or demand upon, Tenant, make any payment or perform any other act on the part of Tenant to be made and performed as in this Lease provided, in such manner and to such extent as Landlord may reasonably deem desirable, and in exercising any such rights, Landlord may pay necessary and incidental costs and expenses, employ counsel, and incur and pay reasonable attorneys' fees. The making of any such payment or the performing of any other act by Landlord pursuant to this Article shall not waive, or release Tenant from, any obligations of Tenant in this Lease contained. All sums so paid by Landlord and all reasonably necessary and incidental costs and expenses in connection with the performance of any such act by Landlord shall, except as otherwise in this Lease expressly provided, be payable to Landlord on demand, and Tenant covenants to pay any such sum or sums promptly, and Landlord shall have (in addition to any other right or remedy of Landlord) the same rights and remedies in the event of the non-payment thereof by Tenant as in the case of default by Tenant in the payment of the Base Rent. Whenever practicable, Landlord, before proceeding as provided in this Section 12.4, shall give Tenant notice in writing of ₹he failure of Tenant which Landlord proposes to remedy, and shall allow Tenant such length of time as may be reasonable in the circumstances, consistent with any grace periods contained herein, but not exceeding 10 days from the giving of notice, to remedy the failure itself and, if Tenant shall not remedy the failure in the time so allowed, Landlord shall be deemed to have given "due notice" and may proceed as provided in this Section 12.4; provided that nothing in this Section shall prevent Landlord from acting without notice to Tenant in case of any emergency wherein there is danger to property or person or where there may exist any violation of Legal Requirements including but not limited to the presence of Hazardous Materials, in which event no notice shall be required.

Section 12.5Cumulative Remedies. The specified remedies to which Landlord may resort under the terms of this Lease, or under the provisions of applicable law, are cumulative and not intended to be exclusive of any other remedies or means of redress to which Landlord may be lawfully entitled in case of any breach or threatened breach by Tenant of any provisions of this Lease. The failure of Landlord to insist in any one or more cases upon the strict performance of any of the covenants of this Lease or to exercise

any option contained herein shall not be construed as a waiver or a relinquishment for the future of such covenant or option. Receipt by Landlord of any Base Rent or Additional Rent payment with knowledge of the breach of any covenants hereof shall not be deemed a waiver of such breach. No waiver by Landlord of any provision of this Lease shall be deemed to have been made unless expressed in writing and signed by it. In addition to the other remedies provided in this Lease, Landlord shall be entitled to restraint by injunction of any violation or attempted or threatened violation of any of the covenants, conditions or provisions of this Lease.

Section 12.6Expenses of Enforcement. Tenant shall pay all reasonable expenses and reasonable attorneys' fees incurred by Landlord in enforcing any obligation or any remedies hereunder including, without limitation, in connection with collection of Base Rent or Additional Rent, recovery by Landlord of the Premises, or in any litigation in which Landlord shall become involved by reason of any act or negligence of Tenant's Invitees or any breach of this Lease by Tenant. Landlord shall pay all reasonable expenses and reasonable attorneys' fees incurred by Tenant in enforcing any obligation or any remedies hereunder including any litigation in which Tenant shall become involved by reason of any act or negligence of Landlord or any breach of this Lease by Landlord.

Section 12.7Landlord's Default. Landlord shall not be deemed to be in default hereunder unless such default shall remain uncured for more than 30 days following written notice from Tenant to Landlord specifying the nature of such default, or such longer period as may be reasonably required to correct such default. Landlord's liability to keep, maintain, and repair shall always be limited to the cost of making such repair or accomplishing such maintenance or repair. In no event whatsoever shall Landlord be liable for consequential or any indirect damages. The provisions of this Section 12.7 are further subject to the provisions of Articles X and Xl dealing with eminent domain and fire and other casualty, and Section 6.3 dealing with interruption of services. Tenant hereby acknowledges and agrees that the obligations of Tenant hereunder shall be separate and independent covenants and agreements, that the obligations of Tenant hereunder, including, without limitation the obligation to pay Base Rent and Additional Rent and other sums due hereunder, shall continue unaffected, unless the requirement to pay or perform the same shall have been terminated or abated pursuant to an express provision of this Lease. Landlord and Tenant each acknowledges and agrees that the independent nature of the obligations of Tenant hereunder represents fair, reasonable, and accepted commercial practice with respect to the type of property subject to this Lease.

Section 12.8Limitation of Landlord's Liability. The obligations of Landlord hereunder shall be binding upon Landlord and each succeeding owner of Landlord's interest hereunder only during the period of such ownership, and Landlord and each succeeding owner shall have no liability whatsoever except for its obligations during each such respective period. Tenant agrees for itself and each succeeding holder of Tenant's interest, or any portion thereof, hereunder, that any judgment, decree or award obtained against Landlord or any succeeding owner of Landlord's interest, which is in any manner related to this Lease, the Premises or Tenant's use and occupancy of the Premises or the Common Areas, or the remainder of the Landlord's Property, whether at law or in equity, shall be satisfied out of Landlord's equity in the land and buildings then comprising the Landlord's Property to the extent then owned by Landlord and such succeeding owner, and further agrees to look only to such assets (or proceeds thereof) and to no other assets of Landlord, or such succeeding owner, for satisfaction. Neither Landlord nor any Person executing this Lease on behalf of Landlord, nor any partner, limited or general, or any officer, director, employee, member, trustee, beneficiary, or owner of Landlord, nor any subsequent Landlord, or any partner, limited or general, or any officer, director, employee, member, trustee, beneficiary, or owner of any subsequent Landlord shall have any personal liability hereunder. The remedies provided to Tenant in this Lease are exclusive, and Landlord will not be liable under any theory of recovery, whether based on contract, tort or otherwise.

Section 12.9Late Payment and Administrative Expense. If Tenant shall fail to pay Base Rent, Additional Rent or other charges after the same become due and payable under this Lease, such unpaid amounts shall bear interest from the due date thereof to the date of payment at the lesser of (a) a per annum rate equal to 3% plus the prime rate of Bank of America (or any successor) in effect on the day the payment became due and subject to change thereafter or (b) the maximum rate permitted by applicable

law ("Interest Payment"). In addition, if Landlord is required to redeposit any check which is returned for insufficient funds or if Tenant shall fail to pay Base Rent, Additional Rent or other charges on or before the date on which the same become due and payable, then Tenant shall also pay to Landlord an administrative expense charge ("Administrative Expense") of 5% of the amount thereof for each calendar month or part thereof after the due date of such payment until such payment is received by Landlord. The provisions herein for Interest Payment and Administrative Expense shall not be construed to relieve Tenant of the obligation to pay Base Rent, Additional Rent and all other charges when due under this Lease and shall be in addition to and not in limitation of Landlord's other remedies as provided for in this Lease.

## ARTICLE XIII

## MISCELLANEOUS PROVISIONS

Section 13.1Brokers. Each party represents that it has not dealt with any Person in connection with the Premises or the negotiation or execution of this Lease other than officers, employees and attorneys of Landlord and Brokers. Each party shall indemnify and save harmless the other from and against all claims, liabilities, costs and expenses incurred as a result of any breach of the foregoing representation. The fees payable to Brokers for this Lease shall be payable by Landlord subject to and in accordance with the terms of separate agreements between Landlord and Brokers.

Section 13.2Quiet Enjoyment. Tenant shall, upon paying all Base Rent and Additional Rent due hereunder and observing and performing all of the terms, covenants and conditions on Tenant's part to be observed and performed, peaceably and quietly have and hold the Premises without hindrance or molestation by any Person or Persons lawfully claiming by, through or under, Landlord, subject, however, to the terms of this Lease.

Section 13.3Tenant's Request for Landlord's Action. In the event that at Tenant's written request Landlord takes any action which is not required of Landlord pursuant to this Lease, Tenant shall pay as Additional Rent Landlord's reasonable attorneys' fees, expenses and disbursements in connection with such action, with payment to be made by Tenant within 15 days after billing therefor by Landlord.

Section 13.4Notices. Any notice, demand, request or statement required or intended to be given or delivered under the terms of this Lease shall be in writing, shall be addressed to the party to be notified at the address or addresses set forth in the Summary of Basic Terms or at such other address in the continental United States as each party may designate for itself from time to time by notice hereunder, and shall be deemed to have been given, delivered or served upon the earliest of (a) 3 days following deposit in the U.S. Mail, with proper postage prepaid, certified or registered, return receipt requested, (b) the next Business Day after delivery to a regularly scheduled overnight delivery carrier with delivery fees either prepaid or an arrangement, satisfactory with such carrier, made for the payment of such fees, or (c) receipt of notice given by telecopy or personal delivery.

Section 13.5Waiver of Subrogation. Landlord and Tenant hereby release each other, to the extent of their respective insurance coverages, from any and all liability for any loss or damage caused by fire, any of the extended coverage casualties, or other casualties insured against, even if such fire or other casualty shall be brought about by the fault or negligence of the party benefited by the release or its agents, provided, however, this release shall be in force and effect only with respect to loss or damage occurring during such time as the policies of fire, extended coverage and other insurance, maintained by the releasing party shall contain a clause, or be subject to a statutory provision, to the effect that such release shall not affect said policies or the right of the releasing party to recover thereunder. Landlord and Tenant each agree that its fire, extended coverage, and other insurance policies will include such a clause. To the extent that Tenant is a self-insurer with respect to personal property, the provisions of Section 7.8 shall be applicable.

Section 13.6Entire Agreement; Execution: Time of the Essence and Headings and Table of Contents. This Lease together with all Exhibits referred to herein and the Summary of Basic Terms, sets forth the entire agreement between the parties hereto and cannot be modified or amended, except in a

writing duly executed by the respective parties. This Lease, together with all Exhibits referred to herein and the Summary of Basic Terms, supersedes all previous written and oral negotiations, understandings and agreements regarding the subject matter of this Lease. Neither Landlord nor any Person acting on behalf of Landlord has made any representations to Tenant on which Tenant has relied in entering into this Lease except any representations expressly stated in this Lease. This Lease is executed as a sealed instrument and in multiple counterparts, all copies of which are identical, and any one of which is to be deemed to be complete in itself and may be introduced in evidence or used for any purpose without the production of any other copy. Time is of the essence with respect to the obligations of Tenant and Landlord to be performed within a specific time frame in this Lease. The headings throughout this Lease and the Table of Contents are for convenience of reference only, and shall in no way be held or deemed to define, limit, explain, describe, modify or add to the interpretation, construction or meaning of any provision of this Lease.

Section 13.7Partial Invalidity. If any term or condition of this Lease or its application to any Person or circumstance shall to any extent be in violation of or unenforceable under any law, rule, regulation or order (including any court order) now existing or hereafter enacted or entered by any court or other governmental entity having competent jurisdiction (including after all appeals therefrom), the remainder of this Lease, or the application of such term or condition to Persons or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby and shall be enforceable to the fullest extent not prohibited by law.

Section 13.8No Waiver. No assent, express or implied, by Landlord to any breach of any agreement or condition herein contained on the part of Tenant to be performed or observed, and no waiver, express or implied, of any such agreement or condition shall be deemed to be a waiver of or an assent to any succeeding breach of the same or any other agreement or condition; the acceptance by Landlord of Base Rent or Additional Rent due hereunder (whether such payment is made by Tenant or another Person), or silence by Landlord as to any breach, shall not be construed as waiving any of Landlord's rights hereunder unless such waiver shall be in writing. No payment by Tenant or acceptance by Landlord of a lesser amount than shall be due Landlord from Tenant shall be deemed to be anything but payment on account, and the acceptance by Landlord of a check for a lesser amount with an endorsement or statement thereon, or upon a letter accompanying said check, that said lesser amount is payment in full shall not be deemed an accord and satisfaction, and Landlord may accept said check without prejudice to recover the balance due or pursue any other remedy.

Section 13.9Holdover. If Tenant remains in the Premises beyond the expiration of this Lease at the end of the Lease Term, or sooner following an early termination as provided for herein, such holding over shall not be deemed to create any tenancy, but Tenant shall be a daily Tenant at sufferance only subject to all of Tenant's obligations set forth herein, but at a Base Rent equal to one and one-half (11/2) times the Base Rent then most recently in effect and Additional Rent and other charges provided for under this Lease, with such Base Rent and Additional Rent to be charged on a monthly basis for each calendar month or portion thereof for which Tenant holds over, without proration for a partial calendar month. The acceptance of a purported rent check following termination shall not constitute the creation of a tenancy at will, it being agreed that Tenant's status shall remain that of a daily Tenant at sufferance, at the aforesaid daily rate. Tenant shall also pay to Landlord all damages, if any, sustained by reason of any such holding over. Otherwise, such holding over shall be on the terms and conditions set forth in this Lease as far as applicable.

Section 13.10When Lease Becomes Binding. The submission of this document for examination and negotiation does not constitute an offer to lease or a reservation or an option for the Premises, and this document shall become effective and binding only upon the execution and delivery hereof by both Landlord and Tenant and the receipt by Landlord of the Security Deposit and the first monthly installment of Base Rent. All negotiations, considerations, representations and understandings between Landlord and Tenant are incorporated herein and may be modified or altered only by agreement in writing between Landlord and Tenant, and no act or omission of any employee or agent of Landlord shall alter, change or modify any of the provisions hereof.

Section 13.11Recordation. Tenant shall not record this Lease with any registry of deeds or land court, and any such recordation will be void and constitute an Event of Default under this Lease.

Section 13.12As Is. Subject to Landlord's delivery obligations set forth in Section 3.1(e), Tenant represents to Landlord that it has leased the Premises after a full and complete examination of the same, and by its execution and delivery of this Lease, Tenant hereby acknowledges that neither Landlord, nor Landlord's agents, has made any representation or promises with respect to the Premises, the Building, or the land upon which it stands, and no rights, easements or licenses are acquired by Tenant, by implication or otherwise, except as may be set forth expressly in this Lease. The execution and delivery of this Lease by Tenant shall be conclusive evidence, as against the Tenant, that Tenant accepts the Premises "AS IS", with all faults.

Section 13.13Financial Statements; Certain Representations and Warranties of Tenant. From time to time as requested by Landlord, Tenant shall provide to Landlord, any actual or potential mortgagee and any actual or potential ground lessor or any representative of any of the foregoing, copies of Tenant's annual financial statements (audited, if available) and quarterly financial statements, all certified as true and correct by the president or chief financial officer of Tenant, and such other information regarding Tenant's financial condition as Landlord may reasonably request. Such financial statements shall reflect a tangible net worth of Tenant, as determined in accordance with GAAP, equal to or greater than $1,000,000.00, and in all events, Tenant must maintain a tangible net worth, as determined in accordance with GAAP, equal to or greater than $1,000,000.00. The foregoing requirements are referred to herein as the "Financial and Net Worth Requirements." Tenant represents and warrants to Landlord, its successors and assigns that: (a) all financial statements of Tenant previously provided to Landlord were true, complete and correct as of their respective dates and fairly and accurately reflect the financial condition of Tenant; (b) there has been no material adverse change in the financial condition of Tenant subsequent to the date(s) of such financial statements; (c) all annual and quarterly financial statements of Tenant provided to Landlord after the date hereof will be prepared in accordance with GAAP, will be true, complete and correct as of their respective dates and will fairly and accurately reflect the financial conditions of the Tenant; (d) Tenant is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and is duly registered and qualified to conduct its business as a foreign corporation in, and is in good standing under the laws of, the Commonwealth of Massachusetts; (e) the execution, delivery and performance of this Lease by Tenant has been duly authorized; and (f) this Lease is valid and binding upon the Tenant and is enforceable against Tenant in accordance with the terms hereof.

Section 13.14Confidentiality. Tenant acknowledges that the terms under which Landlord has leased the Premises to Tenant, (including, without limitation, the rental rate(s), term and other financial and business terms, constitute confidential information of Landlord ("Confidential Information"). Tenant covenants and agrees to keep the Confidential Information completely confidential; provided, however, that (a) such Confidential Information may be disclosed by Tenant to those of its officers, employees, attorneys, accountants, lenders and financial advisors (collectively, "representatives") who need to know such information in connection with Tenant's use and occupancy of the Premises and for financial reporting and credit related activities (it being understood that Tenant shall inform its representatives of the confidential nature of such Confidential Information and that such representatives shall be directed by Tenant, and shall each expressly agree, to treat such Confidential Information confidentially in accordance with the terms of this Section), and (b) unless required by applicable law, any other disclosure of such information may only be made if Landlord consents in writing prior to any such disclosure. In furtherance of and not in limitation of the foregoing, Tenant understands and agrees that during the period of any negotiation of the terms of this Lease, the disclosure of Tenant's possible interest in leasing the Premises and the terms thereof could have a material adverse effect on Landlord's business.

Section 13.15Summary of Basic Terms. The Summary of Basic Terms which is affixed to this Lease sets forth certain basic terms and information which is thereafter referred to in the main text of this Lease. Every reference to the Summary of Basic Terms, or to a particular item thereon, shall have the effect of incorporating the Summary, or the particular item thereof, into the main text of this Lease.

Section 13.16Tenant's Existing Lease. Landlord and Tenant hereby acknowledge and agree that they are both currently parties to the Office Lease dated October 3, 2001, by and between Landlord's predecessor-in-interest, BHX, LLC, as Trustee of 320 Needham Realty Trust ("Original Landlord"), as landlord, and Tenant's predecessor-in-interest, Cohen Dermatopathology, P.C. ("Original Tenant"), as tenant, as affected by the (a) First Amendment of Lease dated as of August 23, 2006, by and between Original Landlord and Original Tenant, (b) Lease Assignment dated May 31, 2007, by and between Original Tenant and Caris Diagnostics, Inc. ("Tenant"), (c) Landlord, Tenant and Assignee Agreement dated as of May 31, 2007, by and among Original Landlord, Original Tenant and Tenant, and (d) Second Amendment of Lease dated as of August 8, 2007, by and between TBCI, LLC, as Trustee of 320 Needham Realty Trust ("Interim Landlord"), as successor-in-interest to Original Landlord, and Tenant (collectively, the "320 Needham Lease"). Landlord and Tenant hereby acknowledge and agree that (i) Caris Diagnostics, Inc. changed its name to Miraca Life Sciences, Inc., (ii) Miraca Life Sciences, Inc. is the current tenant under the 320 Needham Lease, and (iii) 320 Needham DE, LLC, a Delaware limited liability company ("320 Needham Landlord"), is the successor-in-interest to Interim Landlord and the current landlord under the 320 Needham Lease. 320 Needham Landlord is an affiliate of Landlord. Landlord, Tenant and, by virtue of its execution of the Joinder to this Lease, 320 Needham Landlord, hereby further acknowledge and agree that the terms and provisions of the 320 Needham Lease, including, without limitation, Tenant's obligation to pay Fixed Minimum Rent and Additional Rent thereunder (as such terms are defined therein) remain in effect until such time as (x) the Rent Commencement Date occurs under this Lease, and (y) Tenant vacates, yields up and surrenders the premises leased under the 320 Needham Lease to 320 Needham Landlord in the condition required thereunder (including, without limitation, Section 7.4 thereof) (the date upon which the conditions in clauses (x) and (y) hereinabove occurs is referred to hereunder as the "320 Needham Lease Yield-Up Date"). Upon the occurrence of the 320 Needham Lease Yield-Up Date and 320 Needham Landlord's acknowledgment of the same in writing, the 320 Needham Lease shall be deemed terminated without any further action required by the parties; provided, that, 320 Needham Landlord and Tenant will promptly execute a written acknowledgement evidencing such termination following the written request from either party to do so.

[*Signature Page Follows*]

Tenant and Landlord, each by its duly authorized officer, have signed this Lease as of the date first set forth above.

TENANT:

MIRACA LIFE SCIENCES, INC.

By:
Name: Tsukasa Sasaki
Title: CFO

LANDLORD:

CRAWFORD STREET DE, LLC

By:
Name: Robert A. Schlager
Title: Treasurer FVP

JOINDER

320 Needham Landlord, by its duly authorized officer, has signed this Lease as of the date first set forth above for the limited purpose of acknowledging the terms and provisions set forth in Section 13.16 of this Lease.

320 NEEDHAM LANDLORD:

320 NEEDHAM DE, LLC

By:
Name: Robert A. Schlager
Title: Treasurer FVP

**FULGENT PHARMA HOLDINGS, INC.**

**2022 OMNIBUS INCENTIVE PLAN**

1. Purposes of the Plan. The purposes of this Plan are to attract and retain the best available personnel, to provide additional incentives to Employees, Directors and Consultants and to promote the success of the Company's business.

2. Definitions. The following definitions shall apply as used herein and in the individual Award Agreements except as defined otherwise in an individual Award Agreement. In the event a term is separately defined in an individual Award Agreement, such definition shall supersede the definition contained in this Section 2.

(a) "Administrator" means the Board or any of the Committees appointed to administer the Plan.

(b) "Affiliate" and "Associate" shall have the respective meanings ascribed to such terms in Rule 12b-2 promulgated under the Exchange Act.

(c) "Applicable Laws" means the legal requirements relating to the Plan and the Awards under applicable provisions of federal securities laws, state corporate and securities laws, the Code, the rules of any applicable stock exchange or national market system, and the rules of any non-U.S. jurisdiction applicable to Awards granted to residents therein.

(d) "Assumed" means that pursuant to a Corporate Transaction either (i) the Award is expressly affirmed by the Company or (ii) the contractual obligations represented by the Award are expressly assumed (and not simply by operation of law) by the successor entity or its Parent in connection with the Corporate Transaction with appropriate adjustments to the number and type of securities of the successor entity or its Parent subject to the Award and the exercise or purchase price thereof which at least preserves the compensation element of the Award existing at the time of the Corporate Transaction as determined in accordance with the instruments evidencing the agreement to assume the Award and Applicable Laws.

(e) "Award" means the grant of an Option, SAR, Dividend Equivalent Right, Restricted Stock, Restricted Stock Unit or Other Award.

(f) "Award Agreement" means the written agreement or other instrument evidencing the grant of an Award, including any amendments thereto. An Award Agreement may be in the form of an agreement to be executed by both the Grantee and the Company (or an authorized representative of the Company) or certificates, notices or similar instruments.

(g) "Board" means the Board of Directors of the Company.

(h) "Change in Control" means the occurrence of any of the following:

(i) an acquisition by any "person" or "group" (as such terms are used in Sections 13(d)(3) and 14(d)(2) of the Exchange Act) of direct or indirect beneficial ownership (as defined in Rule 13d-3 of the General Rules and Regulations under the Exchange Act ("Beneficial Ownership") of 50% or more of either the then outstanding shares of Company common stock (the "Outstanding Company Common Stock") or the combined voting power of the then outstanding voting securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided that

the following acquisitions shall be excluded: (i) any acquisition directly or indirectly by one of the Permitted Holders, (ii) any acquisition directly from the Company, other than an acquisition by virtue of the exercise of a conversion privilege unless the security being so converted was itself acquired directly from the Company, (iii) any acquisition by the Company, or (iv) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or a Subsidiary;

(ii) a majority of the members of the Board are replaced during any twelve (12) month period by directors whose appointment or election is not endorsed by a majority of the Board before the date of appointment or election; or

(iii) consummation of Corporate Transaction; excluding, however, a Corporate Transaction pursuant to which:

(A) all or substantially all of the individuals and entities who have Beneficial Ownership, respectively, of the Outstanding Company Common Stock and Outstanding Company Voting Securities immediately prior to such Corporate Transaction will have Beneficial Ownership, directly or indirectly, of more than 50% of, respectively, the outstanding shares of common stock and the combined voting power of the then outstanding voting securities entitled to vote generally in the election of directors, as the case may be, of the corporation resulting from such Corporate Transaction (including, without limitation, the Company or a corporation that as a result of such transaction owns the Company or all or substantially all of the Company's assets either directly or through one or more subsidiaries) (the "Resulting Corporation") in substantially the same proportions as their ownership, immediately prior to such Corporate Transaction, of the Outstanding Company Common Stock and Outstanding Company Voting Securities, as the case may be;

(B) no "person" or "group" (as such terms are used in Sections 13(d)(3) and 14(d)(2) of the Exchange Act) (other than (1) the Company, (2) an employee benefit plan (or related trust) sponsored or maintained by the Company, Resulting Corporation, or a Subsidiary, or (3) any entity controlled, directly or indirectly, by the Company or a Resulting Corporation) will have Beneficial Ownership, directly or indirectly, of 50% or more of, respectively, the outstanding shares of common stock of the Resulting Corporation or the combined voting power of the outstanding voting securities of the Resulting Corporation entitled to vote generally in the election of directors, except to the extent that such ownership existed prior to the Corporate Transaction; and

(C) individuals who were members of the Board before the Corporation Transaction (or whose appointment or election is endorsed by a majority of such members of the Board) will continue to constitute at least a majority of the members of the board of directors of the Resulting Corporation; or

(iv) the approval by the stockholders of the Company of a complete liquidation or dissolution of the Company.

(i) "Code" means the Internal Revenue Code of 1986, as amended.

(j) "Committee" means any committee composed of members of the Board appointed by the Board to administer the Plan.

(k) "Common Stock" means the common stock of the Company, par value $0.0001 per share.

(l) "Company" means Fulgent Pharma Holdings, Inc., a Delaware corporation, or any successor entity.

(m) "Consultant" means any person (other than an Employee or a Director, solely with respect to rendering services in such person's capacity as a Director) who is engaged by the Company or any Related Entity to render consulting or advisory services to the Company or such Related Entity.

(n) "Continuing Directors" means members of the Board who either (i) have been Board members continuously for a period of at least twelve (12) months or (ii) have been Board members for less than twelve (12) months and were elected or nominated for election as Board members by at least a majority of the Board members described in clause (i) who were still in office at the time such election or nomination was approved by the Board.

(o) "Continuous Service" means that the provision of services to the Company or a Related Entity in any capacity of Employee, Director or Consultant is not interrupted or terminated. In jurisdictions requiring notice in advance of an effective termination as an Employee, Director or Consultant, Continuous Service shall be deemed terminated upon the actual cessation of providing services to the Company or a Related Entity notwithstanding any required notice period that must be fulfilled before a termination as an Employee, Director or Consultant can be effective under Applicable Laws. A Grantee's Continuous Service shall be deemed to have terminated either upon an actual termination of Continuous Service or upon the entity for which the Grantee provides services ceasing to be a Related Entity. Continuous Service shall not be considered interrupted in the case of (i) any approved leave of absence, (ii) transfers among the Company, any Related Entity, or any successor, in any capacity of Employee, Director or Consultant, or (iii) any change in status as long as the individual remains in the service of the Company or a Related Entity in any capacity of Employee, Director or Consultant (except as otherwise provided in the Award Agreement).

Notwithstanding the foregoing, except as otherwise determined by the Administrator, in the event of any spin-off of a Related Entity, service as an Employee, Director or Consultant for such Related Entity following such spin-off shall be deemed to be Continuous Service for purposes of the Plan and any Award under the Plan. An approved leave of absence shall include sick leave, military leave, or any other authorized personal leave. For purposes of each Incentive Stock Option granted under the Plan, if such leave exceeds three (3) months, and reemployment upon expiration of such leave is not guaranteed by statute or contract, then the Incentive Stock Option shall be treated as a Non-Qualified Stock Option on the day three (3) months and one (1) day following the expiration of such three (3) month period.

(p) "Corporate Transaction" means a reorganization, merger, share exchange, consolidation or sale or other disposition of all or substantially all of the assets of the Company.

(q) "Director" means a member of the Board or the board of directors or board of managers of any Related Entity.

(r) "Disability" means such term (or word of like import) as defined under the long-term disability policy of the Company or the Related Entity to which the Grantee provides services regardless of whether the Grantee is covered by such policy. If the Company or the Related Entity to which the Grantee provides service does not have a long-term disability plan in place, "Disability" means that a Grantee is unable to carry out the responsibilities and functions of the position held by the Grantee by reason of any medically determinable physical or mental impairment for a period of not less than ninety (90) consecutive days. A Grantee will not be considered to have incurred a Disability unless he or she furnishes proof of such impairment sufficient to satisfy the Administrator in its discretion.

(s) "Dividend Equivalent Right" means a right entitling the Grantee to compensation measured by dividends paid with respect to Common Stock.

(t) "Employee" means any person, including an Officer or Director, who is in the employ of the Company or any Related Entity, subject to the control and direction of the Company or any Related Entity as to both the work to be performed and the manner and method of performance. The payment of a director's fee by the Company or a Related Entity shall not be sufficient to constitute "employment" by the Company.

(u) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(v) "Fair Market Value" means, as of any date, the value of Common Stock determined as follows:

(i) If the Common Stock is listed on one or more established stock exchanges or national market systems, including without limitation The NASDAQ Global Select Market, The NASDAQ Global Market or The NASDAQ Capital Market of The NASDAQ Stock Market LLC, its Fair Market Value shall be the closing sales price for such stock (or the closing bid, if no sales were reported) as quoted on the principal exchange or system on which the Common Stock is listed (as determined by the Administrator) on the date of determination (or, if no closing sales price or closing bid was reported on that date, as applicable, on the last trading date such closing sales price or closing bid was reported), as reported in The Wall Street Journal or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted on an automated quotation system (including the OTC Bulletin Board) or by a recognized securities dealer, its Fair Market Value shall be the closing sales price for such stock as quoted on such system or by such securities dealer on the date of determination, but if selling prices are not reported, the Fair Market Value of a share of Common Stock shall be the mean between the high bid and low asked prices for the Common Stock on the date of determination (or, if no such prices were reported on that date, on the last date such prices were reported), as reported in The Wall Street Journal or such other source as the Administrator deems reliable; or

(iii) In the absence of an established market for the Common Stock of the type described in (i) and (ii), above, the Fair Market Value thereof shall be determined by the Administrator in good faith.

(w) "Grantee" means an Employee, Director or Consultant who receives an Award under the Plan.

(x) "Incentive Stock Option" means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code.

(y) “Non-Qualified Stock Option” means an Option not intended to, or that does not, qualify as an Incentive Stock Option.

(z) “Officer” means a person who is an officer of the Company or a Related Entity within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

(aa) “Option” means an option to purchase Shares pursuant to an Award Agreement granted under the Plan.

(bb) “Other Award” means an award entitling the Grantee to Shares or cash that may or may not be subject to restrictions upon issuance or cash compensation, as established by the Administrator.

(cc) “Parent” means a “parent corporation”, whether now or hereafter existing, as defined in Section 424(e) of the Code.

(dd) “Permitted Holders” means, as of the date of determination, (i) any and all of Ming Hsieh, his spouse, his siblings and their spouses, and descendants of any of them (whether natural or adopted) (collectively, the “Hsieh Group”) and (ii) any trust established and maintained primarily for the benefit of any member of the Hsieh Group and any entity controlled by any member of the Hsieh Group.

(ee) “Plan” means this 2022 Omnibus Incentive Plan.

(ff) “Registration Date” means the first to occur of (i) the closing of the first sale to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended, of (A) the Common Stock or (B) the same class of securities of a successor corporation (or its Parent) issued pursuant to a Corporate Transaction in exchange for or in substitution of the Common Stock; and (ii) in the event of a Corporate Transaction, the date of the consummation of the Corporate Transaction if the same class of securities of the successor corporation (or its Parent) issuable in such Corporate Transaction shall have been sold to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended, on or prior to the date of consummation of such Corporate Transaction.

(gg) “Related Entity” means any (i) Parent or Subsidiary of the Company, and (ii) any other entity controlling, controlled by or under common control with the Company.

(hh) “Replaced” means that pursuant to a Corporate Transaction the Award is replaced with a comparable stock award or a cash incentive award or program of the Company, the successor entity (if applicable) or Parent of either of them which preserves the compensation element of such Award existing at the time of the Corporate Transaction and provides for subsequent payout in accordance with the same (or, for the Grantee, a more favorable) vesting schedule applicable to such Award. The determination of Award comparability shall be made by the Administrator and its determination shall be final, binding and conclusive.

(ii) “Restricted Stock” means Shares issued under the Plan to the Grantee for such consideration, if any, and subject to such restrictions on transfer, forfeiture provisions, and other terms and conditions as established by the Administrator.

(jj) “Restricted Stock Units” means an Award which may be earned in whole or in part upon the passage of time or the attainment of performance criteria established by the Administrator and which may be settled for cash, Shares or other securities or a combination of cash, Shares or other securities as specified by the Administrator in the Award Agreement.

(kk) “SAR” means a stock appreciation right entitling the Grantee to Shares or cash compensation or a combination thereof, as established by the Administrator, measured by appreciation in the value of Common Stock.

(ll) “Share” means a share of the Common Stock.

(mm) “Subsidiary” means any corporation in which the Company owns, directly or indirectly, at least fifty percent (50%) of the total combined voting power of all classes of stock, or any other entity (including, but not limited to, partnerships and joint ventures) in which the Company owns, directly or indirectly, at least fifty percent (50%) of the combined equity thereof. Notwithstanding the foregoing, for purposes of determining whether any individual may be a Grantee for purposes of any grant of Incentive Stock Options, “Subsidiary” shall have the meaning ascribed to such term in Section 424(f) of the Code.

3. Stock and Cash Subject to the Plan.

(a) Subject to the provisions of Section 10, below, the maximum aggregate number of Shares which may be issued pursuant to Awards initially shall be a number of Shares equal to 15,000,000. Subject to the provisions of Section 10, below, no more than the number of Shares determined by the Administrator may be issued pursuant to Incentive Stock Options granted under the Plan. The Shares to be issued pursuant to Awards may be authorized, but unissued, or reacquired Common Stock.

(b) Any Shares covered by an Award (or portion of an Award), which is forfeited, canceled or expires (whether voluntarily or involuntarily) shall be deemed not to have been issued for purposes of determining the maximum aggregate number of Shares which may be issued under the Plan. Shares that actually have been issued under the Plan pursuant to an Award shall not be returned to the Plan and shall not become available for future issuance under the Plan, except that if unvested Shares (pursuant to a Restricted Stock Award) are forfeited, such Shares shall become available for future grant under the Plan. To the extent not prohibited by the listing requirements of The NASDAQ Global Select Market, The NASDAQ Global Market or The NASDAQ Capital Market of The NASDAQ Stock Market LLC (or other established stock exchange or national market system on which the Common Stock is traded) or Applicable Law, any Shares covered by an Award which are surrendered (i) in payment of the Award exercise or purchase price (including pursuant to the “net exercise” of an option pursuant to Section 7(b)(v)) or (ii) in satisfaction of tax withholding obligations incident to an Award shall be deemed not to have been issued for purposes of determining the maximum number of Shares which may be issued pursuant to all Awards under the Plan, unless otherwise determined by the Administrator. SARs payable in Shares shall reduce the maximum aggregate number of Shares which may be issued under the Plan only by the net number of actual Shares issued to the Grantee upon exercise of the SAR.

4. Administration of the Plan.

(a) Plan Administrator.

(i) Administration with Respect to Directors and Officers. With respect to grants of Awards to Directors or Officers, the Plan shall be administered by (A) the Board or (B) a Committee designated by the Board. Once appointed, such Committee shall continue to serve in its designated capacity until otherwise directed by the Board.

(ii) Administration With Respect to Consultants and Other Employees. With respect to grants of Awards to Employees or Consultants who are neither Directors nor Officers, the Plan shall be administered by (A) the Board or (B) a Committee designated by the Board. Once appointed, such Committee shall continue to serve in its designated capacity until otherwise directed by the Board. The Board or Committee may also authorize one or more Officers to administer the Plan with respect to Awards to Employees or Consultants who are neither Directors nor Officers (and to grant such Awards) and may limit such authority as the Board or Committee, as applicable, determines from time to time.

(b) Powers of the Administrator. Subject to Applicable Laws and the provisions of the Plan (including any other powers given to the Administrator hereunder), and except as otherwise provided by the Board or any Committee, the Administrator shall have the authority, in its discretion to do all things that it determines to be necessary or appropriate in connection with the administration of the Plan, including, without limitation:

(i) to select the Employees, Directors and Consultants to whom Awards may be granted from time to time hereunder;

(ii) to determine whether, when and to what extent Awards are granted hereunder;

(iii) to determine the number of Shares or the amount of cash or other consideration to be covered by each Award granted hereunder;

(iv) to approve forms of Award Agreements for use under the Plan;

(v) to determine the terms and conditions of any Award granted hereunder;

(vi) to amend the terms of any outstanding Award granted under the Plan, provided that any amendment that would adversely affect the Grantee's rights under an outstanding Award shall not be made without the Grantee's written consent, provided, however, that an amendment or modification that may cause an Incentive Stock Option to become a Non-Qualified Stock Option shall not be treated as adversely affecting the rights of the Grantee;

(vii) to reduce, in each case, without stockholder approval, the exercise price of any Option awarded under the Plan and the base appreciation amount of any SAR awarded under the Plan and canceling an Option or SAR at a time when its exercise price or base appreciation amount (as applicable) exceeds the Fair Market Value of the underlying Shares, in exchange for another Option, SAR, Restricted Stock, or other Award or for cash;

(viii) to prescribe, amend and rescind rules and regulations relating to the Plan and to define terms not otherwise defined herein;

(ix) to construe and interpret the terms of the Plan, any rules and regulations under the Plan and Awards, including without limitation, any notice of award or Award Agreement, granted pursuant to the Plan;

(x) to approve corrections in the documentation or administration of any Award;

(xi) to grant Awards to Employees, Directors and Consultants employed outside the United States or to otherwise adopt or administer such procedures or subplans that the Administrator deems appropriate or necessary on such terms and conditions different from those specified in the Plan as may, in the judgment of the Administrator, be necessary or desirable to further the purpose of the Plan; and

(xii) to take such other action, not inconsistent with the terms of the Plan, as the Administrator deems appropriate.

The express grant in the Plan of any specific power to the Administrator shall not be construed as limiting any power or authority of the Administrator; provided that the Administrator may not exercise any right or power reserved to the Board. Any decision made, or action taken, by the Administrator or in connection with the administration of this Plan shall be final, conclusive and binding on all persons having an interest in the Plan.

(c) Indemnification. In addition to such other rights of indemnification as they may have as members of the Board or as Officers or Employees, members of the Board and any Officers or Employees to whom authority to act for the Board, the Administrator or the Company is delegated shall be defended and indemnified by the Company to the extent permitted by law on an after-tax basis against all reasonable expenses, including attorneys' fees, actually and necessarily incurred in connection with the defense of any claim, investigation, action, suit or proceeding, or in connection with any appeal therein, to which they or any of them may be a party by reason of any action taken or failure to act under or in connection with the Plan, or any Award granted hereunder, and against all amounts paid by them in settlement thereof (provided such settlement is approved by the Company) or paid by them in satisfaction of a judgment in any such claim, investigation, action, suit or proceeding, except in relation to matters as to which it shall be adjudged in such claim, investigation, action, suit or proceeding that such person is liable for gross negligence, bad faith or intentional misconduct; provided, however, that within thirty (30) days after the institution of such claim, investigation, action, suit or proceeding, such person shall offer to the Company, in writing, the opportunity at the Company's expense to defend the same.

5. Eligibility. Awards other than Incentive Stock Options may be granted to Employees, Directors and Consultants. Incentive Stock Options may be granted only to Employees of the Company or a Parent or a Subsidiary of the Company. An Employee, Director or Consultant who has been granted an Award may, if otherwise eligible, be granted

additional Awards. Awards may be granted to such Employees, Directors or Consultants who are residing in non-U.S. jurisdictions as the Administrator may determine from time to time.

6. Terms and Conditions of Awards.

(a) Types of Awards. The Administrator is authorized under the Plan to award any type of arrangement to an Employee, Director or Consultant that is not inconsistent with the provisions of the Plan and that by its terms involves or might involve the issuance of (i) Shares, (ii) cash or (iii) an Option, a SAR, or similar right with a fixed or variable price related to the Fair Market Value of the Shares and with an exercise or conversion privilege related to the passage of time, the occurrence of one or more events, or the satisfaction of performance criteria or other conditions. Such awards include, without limitation, Options, SARs, sales or bonuses of Restricted Stock, Restricted Stock Units, Other Awards or Dividend Equivalent Rights, and an Award may consist of one such security or benefit, or two (2) or more of them in any combination or alternative.

(b) Designation of Award. Each Award shall be designated in the Award Agreement. In the case of an Option, the Option shall be designated as either an Incentive Stock Option or a Non-Qualified Stock Option. However, notwithstanding such designation, an Option will qualify as an Incentive Stock Option under the Code only to the extent the $100,000 limitation of Section 422(d) of the Code is not exceeded. The $100,000 limitation of Section 422(d) of the Code is calculated based on the aggregate Fair Market Value of the Shares subject to Options designated as Incentive Stock Options which become exercisable for the first time by a Grantee during any calendar year (under all plans of the Company or any Parent or Subsidiary of the Company). For purposes of this calculation, Incentive Stock Options shall be taken into account in the order in which they were granted, and the Fair Market Value of the Shares shall be determined as of the grant date of the relevant Option. In the event that the Code or the regulations promulgated thereunder are amended after the date the Plan becomes effective to provide for a different limit on the Fair Market Value of Shares permitted to be subject to Incentive Stock Options, then such different limit will be automatically incorporated herein and will apply to any Options granted after the effective date of such amendment.

(c) Conditions of Award. Subject to the terms of the Plan, the Administrator shall determine the provisions, terms, and conditions of each Award including, but not limited to, the Award vesting schedule, forfeiture provisions, form of payment (cash, Shares, or other consideration) upon settlement of the Award, payment contingencies, and satisfaction of any performance criteria.

(d) Acquisitions and Other Transactions. The Administrator may issue Awards under the Plan in settlement, assumption or substitution for, outstanding awards or obligations to grant future awards in connection with the Company or a Related Entity acquiring another entity, an interest in another entity or an additional interest in a Related Entity whether by merger, stock purchase, asset purchase or other form of transaction.

(e) Deferral of Award Payment. The Administrator may establish one or more programs under the Plan to permit selected Grantees the opportunity to elect to defer receipt of consideration to be received under an Award in compliance with Applicable Laws, other than an Award of Options, SARs or Restricted Stock. The Administrator may establish the election procedures, the timing of such elections, the mechanisms for payments of, and accrual of interest or other earnings, if any, on amounts, Shares or other consideration so deferred, and such other terms, conditions, rules and procedures that the Administrator deems advisable for the administration of any such deferral program.

(f) Separate Programs. The Administrator may establish one or more separate programs under the Plan for the purpose of issuing particular forms of Awards to one or more classes of Grantees on such terms and conditions as determined by the Administrator from time to time.

(g) Term of Award. The term of each Award shall be the term stated in the Award Agreement, provided, however, that the term of an Incentive Stock Option shall be no more than ten (10) years from the date of grant thereof. However, in the case of an Incentive Stock Option granted to a Grantee who, at

the time the Option is granted, owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary of the Company, the term of the Incentive Stock Option shall be five (5) years from the date of grant thereof or such shorter term as may be provided in the Award Agreement.

Notwithstanding the foregoing, the specified term of any Award shall not include any period for which the Grantee has elected to defer the receipt of the Shares or cash issuable pursuant to the Award.

(h) Transferability of Awards. Incentive Stock Options may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution and may be exercised, during the lifetime of the Grantee, only by the Grantee. Other Awards shall be transferable (i) by will and by the laws of descent and distribution and (ii) during the lifetime of the Grantee, to the extent and in the manner authorized by the Administrator, but only to the extent such transfers are made in accordance with Applicable Laws to family members, to family trusts, to family controlled entities, to charitable organizations, and pursuant to domestic relations orders or agreements, in all cases without payment for such transfers to the Grantee. Notwithstanding the foregoing, the Grantee may designate one or more beneficiaries of the Grantee's Award in the event of the Grantee's death on a beneficiary designation form provided by the Administrator.

(i) Time of Granting Awards. The date of grant of an Award shall for all purposes be the date on which the Administrator makes the determination to grant such Award, or such other later date as is determined by the Administrator.

7. Award Exercise or Purchase Price, Consideration and Taxes.

(a) Exercise or Purchase Price. The exercise or purchase price, if any, for an Award shall be as follows:

(i) In the case of an Incentive Stock Option:

(A) granted to an Employee who, at the time of the grant of such Incentive Stock Option owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary of the Company, the per Share exercise price shall be not less than one hundred ten percent (110%) of the Fair Market Value per Share on the date of grant; or

(B) granted to any Employee other than an Employee described in the preceding paragraph, the per Share exercise price shall be not less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant.

(ii) In the case of a Non-Qualified Stock Option, the per Share exercise price shall be not less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant.

(iii) In the case of SARs, the base appreciation amount shall not be less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant.

(iv) In the case of other Awards, such price as is determined by the Administrator.

(v) Notwithstanding the foregoing provisions of this Section 7(a), in the case of an Award issued pursuant to Section 6(d), above, the exercise or purchase price for the Award shall be determined in accordance with the provisions of the relevant instrument evidencing the agreement to issue such Award.

(b) Consideration. Subject to Applicable Laws, the consideration to be paid for the Shares to be issued upon exercise or purchase of an Award including the method of payment, shall be determined by the Administrator. In addition to any other types of consideration the Administrator may determine, the Administrator is authorized to accept as consideration for Shares issued under the Plan the following, provided that the portion of the consideration equal to the par value of the Shares must be paid in cash or other legal consideration permitted by the Delaware General Corporation Law:

(i) cash;

(ii) check;

(iii) surrender of Shares or delivery of a properly executed form of attestation of ownership of Shares as the Administrator may require which have a Fair Market Value on the date of surrender or attestation equal to the aggregate exercise price of the Shares as to which said Award shall be exercised;

(iv) with respect to Options, if the exercise occurs on or after the Registration Date, payment through a broker-assisted cashless exercise program made available by the Company;

(v) with respect to Options, payment through a "net exercise" procedure established by the Company such that, without the payment of any funds, the Grantee may exercise the Option and receive the net number of Shares; or

(vi) any combination of the foregoing methods of payment.

The Administrator may at any time or from time to time, by adoption of or by amendment to the standard forms of Award Agreement described in Section 4(b)(iv), or by other means, grant Awards which do not permit all of the foregoing forms of consideration to be used in payment for the Shares or which otherwise restrict one or more forms of consideration.

(c) Taxes. The Company and any Related Entity shall have the power and the right to deduct or withhold, or require a Grantee to remit to the Company or a Related Entity, an amount sufficient to satisfy any federal, state, local, domestic or foreign taxes required to be withheld with respect to any taxable event arising with respect to an Award. The Administrator may require or may permit Grantees to elect that the withholding requirement be satisfied, in whole or in part, by having the Company withhold, or by tendering to the Company, Shares having a Fair Market Value equal to the amount required to be withheld (provided the amount withheld does not exceed the maximum statutory tax rate for an employee in the applicable jurisdictions or such lesser amount as is necessary to avoid adverse accounting treatment).

8. Exercise of Award.

(a) Procedure for Exercise; Rights as a Stockholder.

(i) Any Award granted hereunder shall be exercisable at such times and under such conditions as determined by the Administrator under the terms of the Plan and specified in the Award Agreement.

(ii) An Award shall be deemed to be exercised when written notice of such exercise has been given to the Company in accordance with the terms of the Award by the person entitled to exercise the Award and full payment for the Shares with respect to which the Award is exercised has been made, including, to the extent selected, use of the broker-dealer sale and remittance procedure to pay the purchase price as provided in Section 7(b)(iv).

(b) Exercise of Award Following Termination of Continuous Service.

(i) An Award may not be exercised after the termination date of such Award set forth in the Award Agreement and may be exercised following the termination of a Grantee's Continuous Service only to the extent provided in the Award Agreement.

(ii) Where the Award Agreement permits a Grantee to exercise an Award following the termination of the Grantee's Continuous Service for a specified period, the Award shall terminate to the extent not exercised on the last day of the specified period or the last day of the original term of the Award, whichever occurs first.

(iii) Any Award designated as an Incentive Stock Option to the extent not exercised within the time permitted by law for the exercise of Incentive Stock Options following the termination of a Grantee's Continuous Service shall convert automatically to a Non-Qualified Stock Option and thereafter shall be exercisable as such to the extent exercisable by its terms for the period specified in the Award Agreement.

9. Conditions Upon Issuance of Shares. If at any time the Administrator determines that the delivery of Shares pursuant to the exercise, vesting or any other provision of an Award is or may be unlawful under Applicable Laws, the vesting or right to exercise an Award or to otherwise receive Shares pursuant to the terms of an Award shall be suspended until the Administrator determines that such delivery is lawful and shall be further subject to the approval of counsel for the Company with respect to such compliance. The Company shall have no obligation to effect any registration or qualification of the Shares under federal or state laws.

10. Adjustments Upon Changes in Capitalization. Subject to any required action by the stockholders of the Company and Section 11 hereof, the number and kind of Shares covered by each outstanding Award, the number and kind of Shares available for issuance under the Plan, the exercise or purchase price of each such outstanding Award and any other terms that the Administrator determines require adjustment shall be proportionately adjusted for (i) any increase or decrease in the number of issued Shares resulting from a stock split, reverse stock split, stock dividend, recapitalization, combination or reclassification of the Shares, or similar transaction affecting the Shares, (ii) any other increase or decrease in the number of issued Shares effected without receipt of consideration by the Company, or (iii) any other transaction with respect to Common Stock including a corporate merger, consolidation, acquisition of property or stock, separation (including a spin-off or other distribution of stock or property), reorganization, liquidation (whether partial or complete) or any similar transaction; provided, however that conversion of any convertible securities of the Company shall not be deemed to have been "effected without receipt of consideration." In the event of any distribution of cash or other assets to stockholders other than a normal cash dividend, the Administrator shall also make such adjustments as provided in this Section 10 or substitute, exchange or grant Awards to effect such adjustments (collectively "adjustments"). Any such adjustments to outstanding Awards will be effected in a manner that precludes the enlargement of rights and benefits under such Awards. In connection with the foregoing adjustments, the Administrator may, in its discretion, prohibit the exercise of Awards or other issuance of Shares, cash or other consideration pursuant to Awards during certain periods of time. Except as the Administrator determines, no issuance by the Company of shares of any class, or securities convertible into shares of any class, shall affect, and no adjustment by reason hereof shall be made with respect to, the number or price of Shares subject to an Award.

11. Change in Control. Except as provided otherwise in an individual Award Agreement, in the event of a Change in Control and irrespective of whether the Award is Assumed or Replaced, (A) outstanding Options and SARs shall immediately vest and become exercisable; and (B) the restrictions and other conditions applicable to outstanding Restricted Stock, Restricted Stock Units, and other Share-based Awards, including vesting requirements, shall immediately lapse, and any performance goals relevant to such awards shall be deemed to have been achieved at the target performance level; such Awards shall be free of all restrictions and fully vested; and, with respect to Restricted Stock Units, shall be payable immediately in accordance with their terms or, if later, as of the earliest permissible date under Code Section 409A. The Committee may provide that Awards that remain outstanding after vesting pursuant to the preceding sentence will be Assumed or Replaced in connection with the Change in Control. With respect to Options and SARs, the Committee may also provide for the cashing out of outstanding and vested Options and SARs based on the based upon the per-share consideration being paid for Common Stock in connection with such Change in Control, less the applicable exercise price or base amount; provided, however, that holders of Options and SARs shall be entitled to consideration in respect of cancellation of such Awards only if the per-share consideration less the applicable exercise price or base amount is greater than $0, and to the extent that the per-share consideration is less than or equal to the applicable exercise price or base amount, such Awards shall be cancelled for no consideration. Awards need not be treated uniformly. Notwithstanding the foregoing, with respect to any Award that constitutes deferred compensation under Code Section 409A, to the extent required to comply with Code Section 409A, a transaction that does not constitute a change in control event under Treasury Regulation Section 1.409A-3(i)(5)(i) shall not be considered a Change in Control. For the avoidance of doubt, in no event shall an initial public offering (or reorganizations or other transactions undertaken in connection with an initial public offering) constitute a Change in Control.

12. Effective Date and Term of Plan. The Plan shall become effective upon the earlier to occur of its adoption by the Board or its approval by the stockholders of the Company. It shall continue in effect for a term of ten (10) years unless sooner terminated. Subject to Section 17, below, and Applicable Laws, Awards may be granted under the Plan upon its becoming effective.

13. Amendment, Suspension or Termination of the Plan.

(a) The Board may at any time amend, suspend or terminate the Plan; provided, however, that no such amendment shall be made without the approval of the Company's stockholders to the extent such approval is required by Applicable Laws.

(b) No Award may be granted during any suspension of the Plan or after termination of the Plan.

(c) No suspension or termination of the Plan (including termination of the Plan under Section 11, above) shall adversely affect any rights under Awards already granted to a Grantee.

14. Limitation of Liability. The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority shall not have been obtained.

15. No Effect on Terms of Employment/Consulting Relationship. The Plan shall not confer upon any Grantee any right with respect to the Grantee's Continuous Service, nor shall it interfere in any way with his or her right or the right of the Company or any Related Entity to terminate the Grantee's Continuous Service at any time, with or without cause, and with or without notice.

16. No Effect on Retirement and Other Benefit Plans. Except as specifically provided in a retirement or other benefit plan of the Company or a Related Entity, Awards shall not be deemed compensation for purposes of computing benefits or contributions under any retirement plan of the Company or a Related Entity, and shall not affect any benefits under any other benefit plan of any kind or any benefit plan subsequently instituted under which the availability or amount of benefits is related to level of compensation. The Plan is not a "Pension Plan" or "Welfare Plan" under the Employee Retirement Income Security Act of 1974, as amended.

17. Stockholder Approval. The grant of Incentive Stock Options under the Plan shall be subject to approval by the stockholders of the Company within twelve (12) months before or after the date the Plan is adopted excluding Incentive Stock Options issued in substitution for outstanding Incentive Stock Options pursuant to Section 424(a) of the Code. Such stockholder approval shall be obtained in the degree and manner required under Applicable Laws. The Administrator may grant Incentive Stock Options under the Plan prior to approval by the stockholders, but until such approval is obtained, no such Incentive Stock Option shall be exercisable.

18. Unfunded Obligation. Grantees shall have the status of general unsecured creditors of the Company. Any amounts payable to Grantees pursuant to the Plan shall be unfunded and unsecured obligations for all purposes, including, without limitation, Title I of the Employee Retirement Income Security Act of 1974, as amended. Neither the Company nor any Related Entity shall be required to segregate any monies from its general funds, or to create any trusts, or establish any special accounts with respect to such obligations. The Company shall retain at all times beneficial ownership of any investments, including trust investments, which the Company may make to fulfill its payment obligations hereunder. Any investments or the creation or maintenance of any trust or any Grantee account shall not create or constitute a trust or fiduciary relationship between the Administrator, the Company or any Related Entity and a Grantee, or otherwise create any vested or beneficial interest in any Grantee or the Grantee's creditors in any assets of the Company or a Related Entity. The Grantees shall have no claim against the Company or any Related Entity for any changes in the value of any assets that may be invested or reinvested by the Company with respect to the Plan.

19. Construction. Captions and titles contained herein are for convenience only and shall not affect the meaning or interpretation of any provision of the Plan. Except when otherwise indicated by the context, the singular shall include the plural and the plural shall include the singular. Use of the term "or" is not intended to be exclusive, unless the context clearly requires otherwise.

20. Nonexclusivity of the Plan. Neither the adoption of the Plan by the Board, the submission of the Plan to the stockholders of the Company for approval, nor any provision of the Plan will be construed as creating any limitations on the power of the Board to adopt such additional compensation arrangements as it may deem desirable, including, without limitation, the granting of Awards otherwise than under the Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

21. Governing Law. This Plan and any agreements or other documents hereunder shall be interpreted and construed in accordance with the laws of Delaware to the extent not preempted by federal law. Any reference in this Plan or in the agreement or other document evidencing any Awards to a provision of law or to a rule or regulation shall be deemed to include any successor law, rule or regulation of similar effect or applicability.

**Exhibit 21.1**

**SUBSIDIARIES OF FULGENT GENETICS, INC.**

| Name of Subsidiary | State or Other Jurisdiction of Incorporation or Organization |
|---|---|
| Fulgent Therapeutics LLC | California |
| Fulgent Investment Development Limited | Hong Kong |
| Cytometry Specialists, Inc. | Georgia |
| Inform Diagnostics, Inc | Delaware |
| Fulgent Pharma Holdings, Inc. | Delaware |

**Exhibit 23.1**

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in Registration Statement No. 333-239964 on Form S-3 and Nos. 333-248962 and 333-213912 on Form S-8 of our reports dated February 28, 2023, relating to the financial statements of Fulgent Genetics, Inc. and effectiveness of Fulgent Genetics, Inc.'s internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2022.

*/s/ DELOITTE & TOUCHE LLP*

Los Angeles, California
February 28, 2023

**Exhibit 31.1**

**CERTIFICATION PURSUANT TO**
**RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,**
**AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Ming Hsieh, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2022 of Fulgent Genetics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2023

By: /s/ Ming Hsieh
Ming Hsieh
**Chief Executive Officer**
(principal executive officer)

**Exhibit 31.2**

**CERTIFICATION PURSUANT TO**
**RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,**
**AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Paul Kim, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2022 of Fulgent Genetics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant 's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant 's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2023

By: /s/ Paul Kim
Paul Kim
**Chief Financial Officer**
(principal financial and accounting officer)

**Exhibit 32.1**

**CERTIFICATION PURSUANT TO**
**18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO**
**SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K for the fiscal year ended December 31, 2022 of Fulgent Genetics, Inc. (the "Company"), as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies in his capacity as the specified officer of the Company, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of his knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: February 28, 2023

By: /s/ Ming Hsieh
Ming Hsieh
**Chief Executive Officer**
(principal executive officer)

Date: February 28, 2023

By: /s/ Paul Kim
Paul Kim
**Chief Financial Officer**
(principal financial and accounting officer)

This certification accompanies the Report to which it relates and shall not be deemed filed with the Securities and Exchange Commission or incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Report), irrespective of any general incorporation language contained in such filing.