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, 2018

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, Suite 205 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	**Name of each exchange on which registered**
Common Stock, par value $0.0001 per share	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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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 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, 2018 (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 $22.4 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 10% 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 March 1, 2019, there were 18,265,083 outstanding shares of the registrant's common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the registrant's definitive proxy statement for its 2019 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 strategic plans for our business;
- our operating performance, including our ability to achieve equal or higher levels of revenue, stabilize the historical fluctuations in our performance and achieve or grow profitability;
- the rate and degree of market acceptance and adoption of our tests and genetic testing generally and other anticipated trends in our industry;
- our ability to remain competitive, particularly if the genetic testing market continues to expand and competition becomes more acute;
- our ability to continue to expand the number of genes covered by our tests and introduce other improvements to our tests;
- our continued ability to offer affordable pricing for our tests, in spite of recent price degradation in our industry, and our ability to maintain the low internal costs of our business model and record acceptable margins on our sales;
- our ability to strengthen our existing base of hospital and medical institution customers by maintaining or increasing demand from these customers;
- our ability to grow and diversify our customer base, including our plans to target new institutional and individual customer groups;
- our reliance on a limited number of suppliers and ability to adapt to possible disruptions in their operations;
- our use of our sole laboratory facility and ability to adapt in the event it is damaged or rendered inoperable;
- the level of success of our efforts to increase our global presence, including strengthening relationships with existing and new international customers and establishing other types of arrangements, including our joint venture in the People's Republic of China, or PRC, or other international joint venture or distributor relationships we may pursue;
- the impact on our business of our recent investments in building and restructuring our sales and marketing strategies and teams, and 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, 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 regulations applicable to our business, and our ability to comply with these regulations;
- 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 and pressures or incentives to reduce healthcare costs while expanding individual benefits, as well as the impact of general uncertainty in the U.S. healthcare regulatory environment following the results of the 2016 U.S. presidential election;

- our ability to attract, retain and motivate key scientific and management personnel;
- our expectations regarding our ability to obtain and maintain protection of our trade secrets and other intellectual property rights and not infringe the rights of others;
- our expectations regarding 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 Item1A. "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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This report reflects the completion of the Reorganization, as defined and described below, on September 30, 2016. Pursuant to the Reorganization, Fulgent Therapeutics LLC became a wholly owned subsidiary of the registrant, Fulgent Genetics, Inc. As used in this report, unless the context otherwise requires, (i) the term "Fulgent LLC" refers to Fulgent Therapeutics LLC, (ii) the term "Fulgent Inc." refers to Fulgent Genetics, Inc. and (iii) the terms "Fulgent," the "company," "we," "us" and "our" refer, for periods prior to completion of the Reorganization, to Fulgent LLC and, for periods after completion of the Reorganization, to Fulgent Inc. and its consolidated subsidiaries after giving effect to the Reorganization. Following the Reorganization, Fulgent Inc. is a holding company with no material assets other than 100% of the equity interests in its subsidiaries, including Fulgent LLC, and Fulgent LLC is considered Fulgent Inc.'s predecessor for accounting purposes and Fulgent LLC's financial statements for all periods prior to completion of the Reorganization constitute Fulgent Inc.'s historical financial statements. In this report, Fulgent LLC's equity interests are referred to as "units" and Fulgent LLC's equity holders are referred to as "members."

PART I

Item 1. Business.

Overview

Fulgent is a growing technology company offering comprehensive genetic testing and providing physicians with clinically actionable diagnostic information they can use to improve the quality of patient care. We have developed a proprietary technology platform that allows us to offer a broad and flexible test menu and continually expand and improve our proprietary genetic reference library, while maintaining accessible pricing, high accuracy and competitive turnaround times. Combining next generation sequencing, or NGS, with our technology platform, we perform full-gene sequencing with deletion/duplication analysis in single-gene tests; pre-established, multi-gene, disease-specific panels; and customized panels that can be tailored to meet specific customer needs. We believe our test menu offers more genes for testing than our competitors in today's market, which enables us to provide expansive options for test customization and clinically actionable results. After launching our first commercial genetic tests in 2013, we have expanded our test menu to include approximately 18,000 single-gene tests and more than 900 panels that collectively test for approximately 7,600 genetic conditions, including various cancers, cardiovascular diseases, neurological disorders and pediatric conditions. A cornerstone of our business is our ability to provide expansive options and flexibility for all clients' unique genetic testing needs.

Genetic testing offers the possibility of early identification of a disease or a genetic predisposition to a disease and enhanced disease treatment and prognosis. As a result, we believe widespread genetic testing could enable significant health improvements and healthcare cost reductions by providing patients and clinicians with more advanced knowledge and options for personal health management plans. Due to these and other potential benefits, genetic testing has experienced significant growth in recent years. If this growth trend continues, we believe genetic testing will become part of standard medical care. The knowledge of a person's unique genetic makeup could then begin to play a more important role in the practice of medicine. We believe this growth has been tempered in prior years, however, because many tests are prohibitively expensive, are produced through inefficient processes and often do not result in clinically actionable data. Through our technology platform, we have developed an offering that we believe addresses these industry challenges and provides a sustainable competitive advantage, both in today's genetic testing market and as we seek to implement new diagnostic tools in the future.

Our technology platform, which integrates sophisticated data comparison and suppression algorithms, adaptive learning software, advanced genetic diagnostics tools and integrated laboratory processes, allows us to offer a test menu with expansive genetic coverage. We believe the comprehensive data output and high detection rates of our tests, both made possible by this expansive genetic coverage, provide physicians with information they can readily incorporate into treatment decisions for their patients, which we refer to as clinical actionability. In addition, our technology platform facilitates our ability to perform customized genetic tests using our expansive library of genes, and we believe this flexibility increases the utility of the genetic data we produce. Further, our technology platform provides us with operating efficiencies that help lower our internal costs, which allows us to offer our tests at accessible price points. As a result, our efforts to build and continually enhance our technology platform allow us to deliver comprehensive, adaptable, clinically actionable and affordable genetic analysis while maintaining a low cost per billable test, enabling us to efficiently meet the needs of our growing base of customers. These features of our offering have resulted in rapid volume growth since our commercial launch, with 22,298 billable tests delivered in 2018, 16,578 billable tests delivered in 2017, and an aggregate of over 59,201 billable tests delivered to approximately 980 customers from inception through December 31, 2018.

Genetic Testing Industry

Genetic testing identifies mutations in genes or chromosomal abnormalities. The results of genetic tests can be used to confirm or rule out a diagnosis of a suspected genetic condition, to predict a person's likelihood of developing a genetic condition, and to improve the selection and implementation of drug treatment programs targeting specific diseases.

The availability and accessibility of genetic testing has grown significantly in recent years, due in large part to improvements in testing technologies, particularly next generation sequencing. NGS technology, a 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. As technology advances continue to drive costs down and improve testing quality, the availability and accessibility of genetic tests is expected to continue to accelerate. This expansion of testing availability and accessibility, as well as a growing and aging population; increasing overall incidence of disease; innovations in genomic medicine that enable the selection and implementation of drug treatment programs based on genetic information, or pharmacogenomics; and other factors all contribute to expectations of continued growth in the global market for genetic testing.

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. These industry challenges include: the continued high prices of some genetic tests, in spite of declining prices in recent periods; largely inadequate reimbursement options, due to third-party payors' restrictions on reimbursement to only a narrow subset of genetic tests and certain patients who meet specific criteria; the limited scope of some genetic analysis, which may test only a small portion of the genes in the human genome and thus may fail to diagnose or identify a predisposition to a condition that is linked to mutations in untested genes; inefficient testing processes, which often involve sequential retesting from multiple different laboratories in order to obtain comprehensive results; and the cumbersome and time-consuming nature of test results interpretation, which requires significant expertise and time to review proprietary and publicly available information about individual genetic disorders, genes and variants and understand the implications of genetic mutations that are identified in a genetic test. In addition, the increased competition in our industry in recent years, due in large part to the growth of genetic testing, as well as the cost-saving initiatives on the part of government entities and other third-party payors, have resulted in downward pressure on the price for genetic analysis and interpretation, which have posed challenges to genetic testing laboratories as they seek to maintain both competitive pricing and acceptable revenue levels and margins on test sales. We have approached these competitive and operational industry challenges by building and continually advancing a multi-faceted, scalable technology platform that we believe will facilitate our ability to address many of these challenges.

Our Technology Platform

Our technology-driven approach to the challenges facing our industry has resulted in our development of an integrated technology platform featuring the following proprietary tools and processes:

Proprietary Gene Probes

Many genetic testing providers use gene probes in the sequencing process to extract and target specific genomic regions. A gene probe is a single strand of DNA or RNA that has a base sequence complementary to the base sequence of a targeted gene and that binds to this complementary base sequence when introduced during the sequencing process, thereby identifying the presence and location of the targeted gene. Many companies obtain these gene probes from third-party suppliers. We have developed technologies to design and formulate our own proprietary gene probes, which, when combined with our proprietary genetic reference library and publicly available genetic databases, support our ability to sequence DNA regions we believe laboratories using commercial probes cannot sequence and improve the detection rate of our test data. In turn, we believe this enables us to produce clinically actionable results physicians can use to improve care for their patients. In addition, our proprietary gene probes are specifically engineered to generate genetic data optimized for our software, which enables us to rapidly incorporate new genes into our test menu, develop new panels of disease-specific tests and customize tests for our customers. Moreover, once we develop a probe for a new gene, we can efficiently reproduce, validate and assure the quality of that probe under applicable guidelines and standards, which allows us to continuously and rapidly expand our library of genetic content while increasing the breadth of our test menu. Additionally, we believe our probes more effectively enrich the targeted genes to improve the quality of the sequenced data we produce.

Advanced Database Algorithms

After DNA is sequenced using all appropriate equipment and tools, the fully sequenced genes are analyzed in a process known as curation, in which every DNA sequence is aligned with a known reference sequence and differences between the DNA sequence and the reference sequence are identified. These differences, which represent potential genomic alterations, are then compared to publicly available genetic databases and proprietary genetic libraries to identify pathogenic alterations associated with disease or disease risk. We have developed proprietary data comparison and data suppression algorithms to improve and simplify this curation process by highlighting identified pathogenic mutations. Our advanced data comparison algorithms measure DNA sequences from patient specimens against genetic data available from the broader scientific community and our own proprietary reference library of genetic information, which enables us to rapidly and effectively detect pathogenic mutations. Our advanced data suppression algorithms reduce irrelevant noise in the genetic data we analyze, which improves the efficiency and speed of our data analysis and reduces the reliance upon manual review and comparison in the curation process.

Adaptive Learning Software

We have developed software that automatically incorporates the data from each completed test into our expansive genetic reference library, enabling it to continuously evolve with each set of genes we analyze. This adaptive learning software supports the continuous improvement of our proprietary gene probes and leverages the capabilities of these gene probes to improve the speed and effectiveness of curation and reporting. Our adaptive learning software also communicates with our integrated laboratory systems, which leads to increasing automation processes and other operating efficiencies.

Proprietary Laboratory Information Management Systems

We have developed proprietary laboratory information management systems that are highly integrated with our laboratory processes and adaptive learning software. These systems provide the backbone by which we efficiently manage workflow, monitor quality and ensure the fidelity of information generation and analytics for reporting to our customers. The result is a highly connected platform that allows us to process tests and information in an efficient manner. Our talented team of software engineers continuously iterates with our laboratory and customer-facing personnel to improve the efficiencies of these systems.

Our Solution

The benefits provided by our technology platform include:

Low Internal Cost per Billable Test

We have developed various proprietary technologies that improve our laboratory efficiency and reduce the costs we incur to perform our tests. This technology platform enables us to perform each test and deliver its results at a lower internal cost than many of our competitors, averaging approximately $480 per billable test delivered in 2018. This low cost per billable test allows us to maintain affordable pricing for our customers, averaging approximately $958 per billable test delivered in 2018, which we believe encourages repeat ordering from existing customers and attracts new customers. We believe our low cost per billable test could also facilitate the process for establishing coverage and reimbursement from third-party payors at a level adequate for us to achieve profitability with this payor group.

Broad and Flexible Test Menu

We currently offer single-gene tests on approximately 18,000 genes, which we believe is thousands more than most of our competitors' portfolios. Based on the results of a retrospective study of individuals with a personal or family history of cancer, described below, 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 provide a flexible and customizable test menu for our customers, which can reduce the need for sequential retesting. We offer single-gene tests on all of the genes in our portfolio, as well as deletion/duplication analysis and site-specific tests. If customers desire a broader test, we offer more than 900 pre-established, multi-gene panels that focus on specified genetic conditions. These panels can be adjusted up or down to include more or fewer genes, or customers can design their own panels to their exact specifications. We also offer clinical and full gene exome testing options. We offer our tests at different price points and turnaround times depending on the size and complexity of the test, which increases optionality for our customers. We believe the flexibility of our offering improves the efficiency and utility of the data output by our tests and decreases overall customer costs. We also offer our customers access to our highly qualified genetic counselors and laboratory experts to assist in interpreting the data we provide, which further increases the utility of our test results for ordering physicians.

The benefit of including multiple genes on a single panel was discussed in a study published in 2016 by the University of Southern California, or USC, Norris Comprehensive Cancer Center in *Cancer Genetics*. The study retrospectively evaluated 475 individuals with a personal or family history of cancer who had undergone a clinically indicated multi-gene panel test of six to 110 genes from one of the following six commercial laboratories: Myriad Genetics (n=354), Ambry Genetics (n=100), Fulgent (n=17), University of Washington Genetics Laboratory (n=2), City of Hope Molecular Diagnostics (n=1) and Baylor Genetics Laboratory (n=1). The study concluded that multi-gene panel testing increases the yield of mutations detected and adds to the capability of providing individualized cancer risk assessment. More specifically, the study reported that deleterious mutations were identified in 15.6% of patients tested on a variety of multi-gene panels, which included 8.6% of patients who would not have a mutation detected if a targeted gene-by-gene-approach had been used. The study also presented evidence that, as the number of genes on a panel increased, a higher proportion of panels identified a mutation. The Fulgent panels evaluated in the study contained over 100 genes compared to less than 30 genes in the next largest panel. Additionally, approximately 35% of our panels identified a genetic mutation, and in comparison, the test with the next highest percentage of detected mutations identified mutations in approximately 17% of its tests.

Expansive and Growing Genetic Library

Using our proprietary gene probes and testing processes, we are able to capture large amounts of genetic information from each test we perform—oftentimes more than is ordered for the test—without an incremental increase in our costs. Through this data collection process, we have developed a proprietary reference library of expansive genetic information. This reference library is automatically curated by our adaptive learning software and supplemented with manual curation by our team of highly trained professionals, which adds to and improves upon the information available in public genetic databases. As a result, our integrated technology systems allow us to leverage publicly available information from the broader scientific community with our internally developed reference library to develop what we believe is a more reliable catalog of genetic information and to accelerate, standardize and improve our curation and reporting process.

Our Genetic Tests

Our offering consists of a wide variety of tests and test types, and our customers have a high degree of choice when selecting a test from our menu. A customer may select a single-gene test of any of the genes in our portfolio or a customer may select one of our pre-established panel tests, which are designed to test particular genes and mutations within these genes that relate to a wide range of specified conditions and diseases. For example, our *Focus* and *Comprehensive* oncology panels test 30 genes and 127 genes, respectively, that relate to various cancers and our *Beacon* carrier screening panels test up to 336 genes covering over 320 inherited conditions. We can perform full-gene sequencing with deletion/duplication analysis in all of these tests. In addition, we continually seek to expand our test menu with new genes and panel tests, including our plans to expand our reproductive testing options, including preimplantation genetic screening, or PGS, and preimplantation genetic diagnosis, or PGD. We also plan to increase the genes available on our expanded Beacon carrier screening panel, which, along with preimplantation genetic testing options and newborn genetic analysis options, will round out our family planning testing options. New test offerings in 2018 included solid tumor molecular profiling for somatic cancer testing, rapid whole genome testing developed for children in neonatal intensive care units, or NICU, or pediatric intensive care units, or PICU, our newborn genetic analysis panel, and a single front-line test designed to comprehensively detect ataxia-related variants and repeat expansions via sequencing.

We also offer certain research service tests, which we refer to as "sequencing as a service" and which are primarily ordered by our research institution and other similar institutional customers. In addition, we offer whole exome and clinical exome panel tests, which test all genes included in our portfolio and up to 4,681 genes located in the exome, respectively, and produce results that we combine with the individual's unique clinical presentation and family history to enhance the clinical relevance of the results. Our whole exome and clinical exome tests also include the option for Trio testing, which involves sequencing the genes of a patient's parents and is thought to enhance the utility of the test results. In addition, we offer whole genome testing, which determines and tests the complete DNA sequence of a genome at a single time. We also provide known mutation testing, which can be used to target familial specific or other desired mutations, as well as repeat expansion testing, which tests for a particular type of mutation known as "copy choice" DNA replication.

Importantly, all of our pre-established panels are customizable, offering customers the ability to add or remove genes at their election. To further increase test option flexibility, as well as to reduce the complexity of ordering tests, we consistently strive to innovate our pricing structure and features for our available tests. To this end, we implemented several new features in late 2018: As a standard offer, pricing for pre-established panels, exome panel tests, and reflex test options now consists of one flat fee for singleton, duo, or trio testing. In addition, if a variant is reported in a proband for whom duo or trio testing was not originally ordered, the ordering physician is given the option of adding complementary familial known mutation testing, or FKMT, for any variant reported by Fulgent in the proband's final report, for up to two first-degree relatives. We believe these options represent competitive pricing features that will streamline the test ordering process, give customers more flexibility with added value, and reduce barriers to trio and familial testing, which can both increase the clinical utility of genetic testing for a single proband.

Our Customers

Since inception, we have sold our tests to approximately 980 total 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. Aggregating customers that are under common control or are affiliates, one of our customers contributed 13% of our total revenue in 2018, and three of our customers each contributed 14%, 12% and 10% of our total revenue in 2017.

We have primarily sold our tests to hospitals and medical institutions. We have approached the genetic testing market with a focus on these customers in part because they are frequent and high-volume users of genetic tests. We believe this customer base provides a meaningful opportunity for further growth by acquiring additional hospital and medical institution customers and by deepening our relationships with existing customers to drive increased ordering. Additionally, collection of billings from these institutional customers is generally more attainable than from other types of customers in today's reimbursement environment, as approximately 78% of our test billings that were generated and due in 2018 were paid during that period. In addition, we believe hospitals and medical institutions are early adopters of NGS technology and could influence broader clinical acceptance of genetic testing.

We are also seeking to expand our customer base to include new customer groups. To this end, we have contracted directly with a national health insurance company to become an in-network provider and enrolled as a supplier with the Medicare program and some state Medicaid programs, in an effort to obtain coverage and reimbursement for our tests to make them accessible to more individual physicians. In addition, we are building relationships with research institutions and other similar institutional customers, a national clinical laboratory, regional medical networks and various other organizations to facilitate access to physicians, practitioners and other new customer groups, including certain U.S. military and other government agencies. 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, these relationships do not obligate any party to order our tests.

Much of our business to date has been from non-U.S. customers, with approximately $8.8 million and $9.7 million of our revenue coming from non-U.S. sources in 2018 and 2017, respectively. These customers are located in a variety of geographic markets, including Canada, where we have historically focused much of our international efforts, the PRC, where we started selling tests directly to customers in the third quarter of 2016, and other regions, such as Australia, Europe and the Middle East. In addition, we have worked with one of our large stockholders to establish a joint venture to offer genetic testing to customers in the PRC, which was formed in April 2017 and which we refer to as FF Gene Biotech. We believe FF Gene Biotech could expand our long-term opportunities to address the genetic testing market in Asia.

Our customers can generally be divided into three categories based on the party from which we receive payment for our tests: hospitals, medical and other institutions; patients and third-party payors. Hospitals, medical and other institutions are responsible for paying for the vast majority of the tests we have delivered since our inception. We bill these organizations for our tests and they are responsible for paying us directly and either billing their patients separately or obtaining reimbursement from third-party payors in connection with a patient's diagnosis related group, or DRG. 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. Third-party payors, which consist of private health insurers, the Centers for Medicare and Medicaid Services, or CMS, and certain state Medicaid agencies, have been responsible for paying for a small number of the tests we have delivered to date; however, as we seek to expand our customer base to include more individual practitioners, we expect this category of payors would be responsible for many of the tests we deliver to these customers.

Third-party payors require us to identify the test for which we are seeking reimbursement using a Current Procedural Terminology, or CPT, code set maintained by the American Medical Association, or AMA. Where we offer a multi-gene panel and there is no CPT code for the full panel but the panel includes a gene for which the AMA has an established CPT code, we identify the test provided under that CPT code when billing a third-party payor for that test. In cases where there is not a specific CPT code, our test may be billed under a miscellaneous code for an unlisted molecular pathology procedure. Because this miscellaneous code does not describe a specific service, the insurance claim must be examined to determine what service was provided, whether the service was appropriate and medically necessary, and whether payment should be rendered, which may require a letter of medical necessity from the ordering physician. Given the changing CPT coding environment and our development of relationships with third-party payors, we expect that our practices regarding billing these payors will evolve in the future.

Sales and Marketing

Our sales and marketing force currently consists of two lean internal teams of sales and marketing experts, respectively, with deep experience in our industry, as well as a network of independent sales representatives who are knowledgeable about our tests. 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 periods, 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.

Our sales and marketing strategy is designed to expand our brand awareness, grow our customer base and further penetrate our relationships with existing customers. We aim to achieve these objectives by providing education about the benefits and full scale of our offering, both to the medical community in general and to our targeted customer and geographic markets. We plan to expand our presence and test volume in international markets through our own direct sales team, which includes one sales person dedicated to international markets, a number of independent contractor sales representatives, and, if opportunities arise, by engaging distributors or establishing other types of arrangements, such as joint ventures or other relationships, to manage or assist with sales, logistics, education and customer support in certain territories.

Our marketing activities also include targeted initiatives, including working with medical professional societies to promote awareness of the benefits of our tests and genetic testing in general, presenting at medical, scientific or industry exhibitions and conferences and pursuing or supporting scientific studies of our tests and publication of results in medical or scientific journals, such as the USC Norris Comprehensive Cancer Center study published in 2016 and discussed above and an evaluation of the clinical utility of proactive genetic screening for healthy individuals, which was presented at the 2018 American Society of Human Genetics conference. In addition, we conduct email advertising campaigns and social media awareness campaigns to existing and potential future customers when we want to send a specific message about our company and our brand, including, for instance, when we launch new tests or new test options and when we add new genes to our test menu.

Our sales and marketing strategy is also focused on offering differentiated and highly available customer service resources, which we believe is an important factor in maintaining and deepening our customer relationships. Genetic tests are highly complex by nature and we recognize that our customers may want to discuss with us available testing options, specimen collection requirements, expected turnaround times, the cost of our tests and the clinical reports we produce. As a result, we offer comprehensive customer service designed to enable efficient ordering and increase the accessibility of our clinical reports, including customer access to our licensed and qualified laboratory directors who review and approve each report we produce.

Our sales and marketing teams also explore strategic collaboration opportunities with various research and medical institutions. New partnerships formed in 2018 include a collaboration with the Columbia University Irving Medical Center to make expanded carrier screening available to Columbia patients, and a collaboration with StemCyte, a global regenerative therapeutics company, to offer both expanded carrier screening and newborn genetic analysis to families in the reproductive planning stage.

Our Suppliers

We rely on a limited number of suppliers for certain laboratory substances used in the chemical reactions incorporated into our processes, which we refer to as reagents, as well as for the sequencers 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. Our laboratory operations would be interrupted if we encounter delays or difficulties securing these reagents, sequencers, other equipment or 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 molecular genetic testing services, including specialty and reference laboratories that offer traditional single-gene and multi-gene tests. Principal competitors include companies such as Ambry Genetics, Inc.; Roche; GeneDx, a subsidiary of OPKO Health, Inc.; Invitae Corporation; Myriad Genetics, Inc.; and Pathway Genomics Corporation, as well as other commercial and academic laboratories. In addition, 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 testing we would otherwise perform for them. In this regard, continued development of, and associated 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. Additionally, 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 biotechnology and genetic testing fields continue to undergo significant consolidation, permitting larger clinical laboratory service providers to increase cost efficiencies and service levels, resulting in more intense competition.

We believe the principal competitive factors in our market are:

- breadth and depth of genetic content;
- flexibility of test customization;
- price of tests;
- quality of results, including their reliability, accuracy and clinical actionability;
- accessibility of results;
- coverage and reimbursement arrangements with third-party payors;
- turnaround time;
- customer service;
- convenience of testing; and
- brand recognition.

We believe we compare favorably with our competitors on the basis of these factors. However, many of our existing and potential future 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 as use of NGS for clinical diagnosis and preventative care increases. Further, companies or governments that effectively control access to genetic 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.

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. We rely on this team to conduct 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, 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

CLIA

As a clinical laboratory, we are required to hold certain federal licenses, certifications and permits to conduct our business. In 1988, Congress passed the Clinical Laboratory Improvement Amendments of 1988, or CLIA, which establishes quality standards for all laboratory testing designed to ensure the accuracy, reliability and timeliness of patient test results. Our laboratory is CLIA-certified and accredited by the College of American Pathologists, or CAP, a CLIA-approved accrediting organization.

Under CLIA, a laboratory is any facility that performs laboratory testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease or the impairment or assessment of health. CLIA requires that we hold a certificate applicable to the type of laboratory examinations we perform and that we comply with various standards with respect to personnel qualifications, facility administration, proficiency testing, quality control and assurance and inspections. Laboratories must register and list their tests with 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. CLIA is user-fee funded, such that all costs of administering the program must be covered by the regulated facilities, including certification and survey costs.

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. Our CLIA certification was last renewed October 23, 2017 and is valid for two years. If our clinical reference laboratory is found to be out of compliance with CLIA requirements at any of these inspections, 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 to CLIA requirements, 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. 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 Laboratory Licensure

Under CLIA, states may adopt laboratory regulations that are more stringent than those under federal law, and a number of states have implemented their own more stringent laboratory regulatory requirements. State laws may require that laboratory personnel meet certain qualifications, specify certain quality control procedures or facility requirements or prescribe record maintenance requirements.

Our genetic testing laboratory is located in Temple City, California. As a result, we are required to maintain a license to conduct testing in the State of California. California laws establish standards for day-to-day operations of our laboratory, including with respect to the training and skills required of personnel, quality control and proficiency testing requirements. If our clinical reference laboratory is out of compliance with California standards, the State of California Department of Public Health, or CA DPH, may suspend, restrict or revoke our license to operate our clinical reference laboratory, assess substantial civil money penalties or impose specific corrective action plans. Any such actions could materially affect our business. We maintain a current license in good standing with CA DPH.

Additionally, several states require the licensure of out-of-state laboratories that accept specimens from those states and/or receive specimens from laboratories in those states. Our laboratory holds the required out-of-state laboratory licenses to perform testing on specimens from Florida, Maryland and Pennsylvania. In addition to having a laboratory license in New York, our laboratory is required to obtain approval on a test-specific basis by the New York State Department of Health before specific testing is performed on specimens from New York. Because our licensure application is currently pending in New York, we are currently prohibited from performing tests on specimens from New York until our license is approved.

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

Pursuant to its authority under the Federal Food, Drug, and Cosmetic Act, or FDC Act, the U.S. Food and Drug Administration, or 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 tests that we offer may be considered IVDs and as such, medical devices. The laws and regulations governing the marketing of IVDs are evolving, 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.

The FDC Act classifies medical devices into one of three categories based on the risks associated with the device and the level of control necessary to provide reasonable assurance of safety and effectiveness. Devices deemed by the FDA to pose the greatest risk, such as life-sustaining, life-supporting or implantable devices or devices deemed not substantially equivalent to a previously 510(k) cleared device, are categorized as Class III. These devices typically require submission and approval of a premarket approval application, or PMA. Devices deemed to pose lower risk are categorized as either Class I or II, which requires the manufacturer to submit to the FDA a 510(k) premarket notification submission requesting clearance of the device for commercial distribution in the United States. Some low-risk devices are exempted from this requirement. When a 510(k) premarket notification submission is required, the manufacturer must submit to the FDA a premarket notification submission demonstrating that the device is "substantially equivalent" to: (i) a device that was legally marketed prior to May 28, 1976, for which PMA approval is not required, (ii) a legally marketed device that has been reclassified from Class III to Class II or Class I, or (iii) another legally marketed, similar device that has been cleared through the 510(k) clearance process.

After the FDA permits a device to enter commercial distribution, numerous regulatory requirements apply. These include: the Quality System Regulation, which requires manufacturers to follow elaborate design, testing, control, documentation and other quality assurance procedures during the manufacturing process; labeling regulations; the FDA's general prohibition against promoting products for unapproved or "off-label" uses; and the Medical Device Reporting regulation, which requires that manufacturers report to the FDA if their device may have caused or contributed to a death or serious injury or malfunctioned in a way that would likely cause or contribute to a death or serious injury if it were to recur. The FDA has broad post-market and regulatory and enforcement powers. Failure to comply with the applicable U.S. medical device regulatory requirements could result in, among other things, warning letters, fines, injunctions, consent decrees, civil penalties, repairs, replacements, refunds, recalls or seizures of products, total or partial suspension of production, the FDA's refusal to grant future premarket clearances or approvals, withdrawals or suspensions of current product applications, and criminal prosecution.

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 laboratory developed tests, or LDTs, which are a subset of IVDs that are intended for clinical use and designed, manufactured and used within a single laboratory. We believe our tests fall within the definition of an LDT. 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. Pursuant to the Food and Drug Administration Safety and Innovation Act of 2012, the FDA notified Congress on July 31, 2014 that the FDA intended to issue in 60 days the draft Framework Guidance and the Notification Guidance. On October 3, 2014, the FDA issued the draft Framework Guidance and Notification Guidance for comment. The Framework Guidance stated that the FDA intends to modify its policy of enforcement discretion with respect to LDTs in a risk-based manner consistent with the existing classification of medical devices. The draft guidances resulted in a large number of public comments from interested parties. The FDA subsequently announced in November 2016 that it would not issue a final guidance to allow for further public discussion on an appropriate LDT oversight approach and to give congressional committees the opportunity to develop a legislative solution. In January 2017, the FDA published a Discussion Paper on Laboratory Developed Tests, which provided a synthesis of the feedback the agency had received and which outlined, as part of the synthesis, a new possible approach to LDT oversight. The Discussion Paper noted that the synthesis does not represent the formal position of the FDA, nor is it enforceable. In December 2018, members of Congress released a discussion draft of a possible bill to regulate in vitro clinical tests including LDTs.

If and when the FDA finalizes its position on regulation of LDTs through formal guidance, or new legislation is passed, or if the FDA disagrees with our assessment that our tests fall within the definition of an LDT, we could for the first time be subject to enforcement of regulatory requirements such as registration and listing requirements, medical device reporting requirements and quality control requirements (although the possible approach outlined in the Discussion Paper – as well as the recent Congressional discussion draft – would exempt certain previously marketed LDTs from many requirements, in other words, it would "grandfather" many existing LDTs). Any new FDA enforcement policies affecting LDTs may result in increased regulatory burdens on our ability to continue marketing our tests and to develop and introduce new tests in the future. Additionally, if and when the FDA begins to actively enforce its premarket submission regulations with respect to LDTs generally or our tests in particular, we may be required to obtain premarket clearance for our tests under Section 510(k) of the FDC Act or approval of a 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 products 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.

While there is also the risk that the FDA does not consider our tests to be LDTs, the draft Framework Guidance stated that, in the interest of ensuring continuity in the testing market and avoiding disruption of access to tests marketed as LDTs that do not meet the FDA's definition of LDTs, the FDA intends to apply the same risk-based framework described in the Framework Guidance to any IVD that is offered as an LDT by a CLIA-certified laboratory. We would expect the FDA to take the same or similar approach in any new program for the regulation of LDTs. If Congress passes legislation regulating LDTs, then the terms of such legislation would control, subject to FDA's administration of any such new law.

Additionally, the FDA has recently solicited public input and published two draft guidance documents relating to FDA oversight of NGS-based tests. The two draft guidance documents on NGS-based tests describe the FDA's current thinking and proposed approach regarding the possible use of FDA-recognized standards to support analytical validity, and public human genetic variant databases to support clinical validity, of these tests. While it appears that the FDA is striving to provide a flexible pathway to device clearance or approval for manufacturers seeking to market NGS-based tests, it is unknown how the FDA may regulate such tests in the future and what testing and data may be required to support such clearance or approval. If premarket review is required for some or all of our tests and the FDA requires more extensive testing such as clinical trials, for example, we could experience significantly increased development costs and delay.

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.

Legislative proposals addressing the FDA's oversight of LDTs have been introduced by Congress in the past and we expect that new legislative proposals may be introduced from time to time in the future. The likelihood that Congress will pass such legislation and the extent to which such legislation may affect the FDA's plans to enforce its medical device requirements with respect to certain LDTs is difficult to predict at this time. If the FDA ultimately lifts its policy of enforcement discretion over LDTs and begins to enforce its medical device requirements with respect to LDTs, our tests may be subject to additional regulatory requirements imposed by the FDA, the nature and extent of which would depend upon applicable final guidance or regulation by the FDA or instruction by Congress. 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.

Reimbursement

CPT Codes

Third-party payors, including private insurers and CMS, require genetic testing companies to identify each test for which reimbursement is sought using a CPT code set maintained by the AMA. These 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 any genes in a panel, in which case our test would be billed under a miscellaneous code for an unlisted molecular pathology procedure. Because these miscellaneous codes do not describe a specific service, the insurance claim would need to be examined to determine the service that was provided, whether the service was appropriate and medically necessary and whether payment should be rendered. This process can require a letter of medical necessity from the ordering physician and it can result in a delay in processing the claim, a lower reimbursement amount or denial of the claim.

In September 2014, the AMA published new CPT codes for genomic sequencing procedures that are effective for dates of service on or after January 1, 2015. These include genomic sequencing procedure codes for certain multi-gene panel tests. In a final determination under the Medicare Clinical Laboratory Fee Schedule, or CLFS, published in November 2014, CMS set the 2015 payment rate for these codes using the gap-fill process. Under the gap-fill process, local Medicare Administrative Contractors, or MACs, establish rates for the codes that each MAC believes meet the criteria for Medicare coverage and considering laboratory charges and discounts to charges, resources, amounts paid by other payors for the tests and amounts paid by the MAC for similar tests. In 2015, gap-filled payment rates were established for some, but not all, of the published codes for genomic sequencing procedures. For the codes for which local gap-filled rates were established in 2015, a national limitation amount for Medicare was established for 2016. For the codes for which local gap-filled rates were not established in 2015, associated procedures are priced by the local MACs in 2016 if an individual MAC determines that such codes should be covered. Where available, the national limitation amount serves as a cap on the Medicare and Medicaid payment rates for a test procedure, which may not be adequate for all of the procedures covered by the applicable codes, including our tests to the extent we are required to report them under these codes.

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 paid under Medicare. 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 to CMS, beginning in 2017 and every three years thereafter (or annually for "advanced diagnostic laboratory tests"), private payor payment rates and volumes for their tests. Laboratories that fail to report the required payment information may be subject to substantial civil monetary penalties. We do not believe that our tests meet the current definition of advanced diagnostic laboratory tests, and therefore we believe we will be required to report private payor rates for our tests every three years. As required under PAMA, CMS will use the rates and volumes reported by laboratories to develop Medicare payment rates for laboratory tests equal to the volume-weighted median of the private payor payment rates for the tests. On June 23, 2016, CMS published the final rule implementing the reporting and rate-setting requirements under PAMA.

As set forth under PAMA, for tests furnished on or after January 1, 2018, Medicare payments for clinical diagnostic laboratory tests will be paid based upon these reported private payor rates. For clinical diagnostic laboratory tests that are assigned a new or substantially revised CPT code, initial payment rates will be assigned by the gap-fill methodology, as under prior law. Initial payment rates for new advanced diagnostic laboratory tests will be based on the actual list charge for the laboratory test.

The payment rates calculated under PAMA became effective starting January 1, 2018. Any reductions to payment rates resulting from the new methodology are limited to 10% per test per year in each of the years 2018 through 2020 and to 15% per test per year in each of the years 2021 through 2023. In late 2017, CMS published the final payment rates and supporting documentation for the new private payor rate-based payment system.

PAMA codifies Medicare coverage rules for laboratory tests by requiring any local coverage determination to be made following the local coverage determination process. PAMA also authorizes CMS to consolidate coverage policies for clinical laboratory tests among one to four laboratory-specific MACs. These same contractors may also be designated to process claims if CMS determines that such a model is appropriate. It is unclear whether CMS will proceed with contractor consolidation under this authorization.

PAMA also authorizes the adoption of new, temporary billing codes and/or unique test identifiers for FDA-cleared or approved tests as well as advanced diagnostic laboratory tests. The AMA's CPT Editorial Panel has approved a proposal to create a new section of billing codes to facilitate implementation of this section of PAMA. At this time, it is unclear whether or when the new section of billing codes will be implemented, nor is it clear if or how these codes would apply to our tests.

Privacy and Security Laws

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 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 most healthcare providers and other covered entities and their respective business associates, including subcontractors of business associates. 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 cover the use and disclosure of PHI by covered entities and business associates, which include subcontractors that create, receive, maintain or transmit PHI on behalf of a business associate. A subcontractor means any person to whom a business associate delegates a function, activity or service, other than in the capacity of the business associate's workforce. 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. The privacy regulations also set forth certain rights of an individual with respect to his or her PHI maintained by a covered entity or business associate, including the right to access or amend certain records containing his or her PHI or to request restrictions on the use or disclosure of his or her PHI.

Covered entities and business associates must also comply with the security regulations of HIPAA and HITECH, which establish requirements for safeguarding the confidentiality, integrity and availability of electronic PHI. In addition, HITECH established, among other things, certain breach notification requirements with which covered entities and business associates must comply. In particular, a covered entity must notify any individual whose unsecured PHI is breached according to the specifications set forth in the breach notification rule. A covered entity must also notify the Secretary of HHS and, under certain circumstances, the media.

There are significant civil and criminal fines and other penalties that may be imposed for violating HIPAA. A covered entity or business associate is also 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 $1.5 million per violation of the same requirement per calendar year. A single breach incident can result in violations of multiple requirements, resulting in potential penalties in excess of $1.5 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. 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.

The HIPAA privacy, security, and breach notification regulations establish a uniform federal "floor," but do not supersede state laws that are more stringent or 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. At least 30 states have enacted laws protecting the privacy and security of health information of residents of their states.The interplay of federal and state laws may be subject to varying interpretations by courts and government agencies, creating complex compliance issues for us and our clients and potentially exposing us to additional expense, adverse publicity, and liability. Further, as regulatory focus on privacy issues continues to increase and laws and regulations concerning the protection of personal information expand and become more complex, these potential risks to our business could intensify. In addition, the interpretation and application of consumer, health-related, and data protection laws are often uncertain, contradictory, and in flux.

State laws in the United States continue to evolve. For example, California recently adopted the California Consumer Privacy Act of 2018, or CCPA, which will come into effect beginning in January 2020. The CCPA establishes a new privacy framework for covered businesses by creating an expanded definition of personal information, establishing new data privacy rights for consumers in the State of California, imposing special rules on the collection of consumer 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. There is uncertainty surrounding the application of the CCPA to parts of our business, and amendments to the law before its effective data may have impact on operations. In addition to the CCPA, other states are introducing similar legislation which will impact compliance obligations and increase complexity and cost of compliance.

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 protect the privacy and security of medical records or medical 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, such as prompt disclosure to affected customers. Congress has also been considering similar federal legislation relating to data privacy and data protection. The Federal Trade Commission 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 Federal Trade Commission Act. 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.

Foreign 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 new General Data Protection Regulation, or GDPR, and Cybersecurity Directive have been enacted in the European Union and became effective in May 2018. These texts 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. The interpretation of some rules is still unclear, and some requirements may be completed by national legislation. This makes it difficult to assess the impact of these new 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 introduces 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.

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, and guidance on implementation and compliance practices are 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, 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.

Fraud and Abuse Laws

In the United States, we must comply with various fraud and abuse laws and we are potentially 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 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 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," which set forth certain provisions that, if met, will assure healthcare providers and other parties that they will not be prosecuted 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 to items or services reimbursed by any third-party payor, including commercial insurers. In addition, in October 2018 the SUPPORT Act was enacted to address the opioid crisis. The SUPPORT Act includes the Eliminating Kickbacks in Recovery Act (EKRA), which may have the effect of applying antikickback principles to clinical laboratories receiving patient referrals in the private pay or commercial insurance setting, even if the clinical laboratory does not offer services relating to addiction treatment or recovery.

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 by a federal government payor program. The qui tam provisions of the False Claims Act allow a private individual to bring actions on behalf of the federal government alleging that the defendant has defrauded the federal government by submitting a false claim to the federal government and permit such individuals to share in any amounts paid by the entity to the government in fines or settlement. In addition, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, which we collectively refer to as the Affordable Care Act, establishes a requirement for providers and suppliers to report and return any overpayments received from government payors under 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.

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 imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or for a claim that is false or fraudulent. This law also prohibits the offering or transfer of remuneration to a Medicare or state healthcare program beneficiary if the person knows or should know it is likely to influence the beneficiary's selection of a particular provider, practitioner, or supplier of items or services reimbursable by Medicare or a state healthcare program, unless an exception applies.

Physician Referral Prohibitions

The U.S. federal law directed at "self-referrals," commonly known as the "Stark Law," 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. The prohibition also extends to payment for any services referred in violation of the Stark Law. A physician or entity that engages in a scheme to circumvent the Stark Law's referral prohibition may be fined up to $100,000 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 civil monetary penalties of up to $15,000 per service, 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.

Many states 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. In addition, some courts have held that the submission of claims to Medicaid that would be prohibited as self-referrals under the Stark Law for Medicare could implicate the False Claims Act.

Physician Sunshine Laws

The Affordable Care Act, among other things, imposed new 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 and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. The reporting program (Open Payments program) is administered by CMS under regulations issued for the program. 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 FDA requires us to obtain premarket clearance or approval for our tests.

Anti-Bribery Laws

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. Under the new regime, 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

In March 2010, the Affordable Care Act was enacted in the United States. The Affordable Care Act made a number of substantial changes to the way healthcare is financed both by governmental and private insurers. For example, the Affordable Care Act requires each medical device manufacturer to pay a sales tax equal to 2.3% of the price for which such manufacturer sells its medical devices. The medical device tax has been suspended by Congress through 2019. It is unclear at this time when, or if, the provision of our LDTs will trigger the medical device tax, and it is possible that this tax will apply to some or all of our existing tests or tests we may develop in the future. It is also possible that the medical device tax will be repealed by Congress. Additionally, the Affordable Care Act establishes an Independent Payment Advisory Board, or IPAB, to propose reductions to payments in order to

reduce the per capita rate of growth in Medicare spending if expenditures exceed certain targets. The expenditure targets for IPAB proposals have not been exceeded at this time, and it is unclear when such targets may be exceeded in the future, when any IPAB-proposed reductions to payments could take effect and how any such reductions would affect reimbursement payments for our tests. The Affordable Care Act 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. Following the results of the 2016 U.S. presidential election and in light of the policies of the current administration, which has threatened to repeal the Affordable Care Act, there is uncertainty regarding the continued effect or the Affordable Care Act in its current form.

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. Typically, such laws are only applicable to entities with a physical presence in the applicable state.

Environmental and Other Regulatory Requirements

Our laboratory is 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

We believe growing and retaining a strong team is crucial to our success. As of March 1, 2019, we had 123 employees, all of which are full-time, engaged in bioinformatics, genetics, software engineering, laboratory management, sales and marketing and corporate and administrative activities. 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.

Corporate Information

We were incorporated in Delaware on May 13, 2016. We are the holding company of our subsidiaries, including primarily Fulgent LLC, which was initially formed in June 2011. On September 30, 2016, Fulgent 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 LLC immediately prior to the Reorganization became all of our stockholders immediately following the Reorganization.

Our initial operations focused on Fulgent LLC's former pharmaceutical business, or the Pharma Business, and in 2013 we commenced the genetic testing business we are currently pursuing. In October 2015, we recapitalized Fulgent LLC to establish two series of units, with the Class D units having economic rights based on the genetic testing business we are currently pursuing and the Class P units having economic rights based on the Pharma Business. On April 4, 2016, Fulgent LLC separated the Pharma Business from the genetic testing business we are currently pursuing in a transaction we refer to as the Pharma Split-Off. The operating results of the Pharma Business have been reported as discontinued operations for all periods in our consolidated financial statements included in this report.

Our headquarters and laboratory 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.

We qualify as an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012, as amended, or JOBS Act. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are applicable generally to other public companies. We will remain an emerging growth company until December 31, 2021, unless our gross revenue exceeds $1.07 billion in any fiscal year before that date, we issue more than $1.0 billion of non-convertible debt in any three-year period before that date or the market value of our common stock held by non-affiliates exceeds $700.0 million as of the last business day of the second fiscal quarter of any fiscal year before that date.

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.

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 and all of the other information included in this report and the other filings we make with the SEC. We believe the risks and uncertainties described below are the most significant we face and the occurrence of any of these risks could harm our business, financial condition, results of operations, prospects and reputation and could cause the trading price of our common stock to decline. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business.

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 billable tests; the prices we charge for our tests due to changes in product, customer or payor mix, general price degradation for genetic tests 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. In addition, in certain prior periods, our results have been impacted by events that may not recur regularly, in the same amounts or at all in the future. Moreover, our limited operating history makes it difficult to determine if fluctuations in our performance reflect seasonality or other trends or are the result of other factors or events. These 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. Additionally, 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 achieve or sustain profitability.

We have a history of losses. Although we achieved profitability in the first three months of 2017, we have recorded losses in all other periods since our inception. As a result, we may not be able to achieve profitability in any future period, and even if we can achieve profitability, we may not be able to sustain it. Further, we have generated limited revenue to date, and our historical revenue levels may not grow at historical rates or at all, and we may not be able to achieve or sustain profitability. We may incur additional losses in the future, particularly as we focus on investing in and growing our business and operations and experience related increases in expenses. Our prior losses and any future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital, which could negatively impact our operations and your investment in our company. Any failure to sustain or grow our revenue levels and achieve or maintain profitability would negatively affect our business, financial condition, results of operations and cash flows, and could cause the market price of our common stock to decline.

Our ability to use net operating losses to offset future taxable income may be subject to limitation.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act, or the 2017 Tax Act, that significantly reforms the Internal Revenue Code of 1986, as amended. The 2017 Tax Act, among other things, includes changes to U.S. federal tax rates, imposes significant additional limitations on the deductibility of interest and net operating loss carryforwards, or NOLs, allows for the expensing of capital expenditures, and puts into effect the migration from a "worldwide" system of taxation to a territorial system. Many of these changes became effective beginning in 2018, without any transition periods or grandfathering for existing transactions. The legislation is unclear in many respects and could be subject to potential amendments and technical corrections, as well as interpretations and implementing regulations by the U.S. Treasury Department and the Internal Revenue Service, any of which could lessen or increase certain impacts of the legislation. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation, which often uses federal taxable income as a starting point for computing state and local tax liabilities.

According to the 2017 Tax Act, our federal NOLs generated in tax years beginning after December 31, 2017 may be carried forward indefinitely, but the deductibility of such federal NOLs is limited. Our NOL carryforwards are also subject to review and possible adjustment by the Internal Revenue Service and state tax authorities.

We are an early-stage company with a limited operating history, which could expose us to enhanced risks and increase the difficulty of evaluating our business and prospects.

We began operations in May 2012 and commercially launched our first genetic tests in 2013. As a result, we have only a limited operating history upon which you can evaluate our business and prospects. Our limited operating history makes it difficult to evaluate our current business and hinders our ability to reliably forecast our future operating results, including revenue, cash flows and movement toward sustained profitability. We have encountered and will continue to encounter risks and uncertainties frequently experienced by growing companies in the life sciences and technology industries, such as risks related to an evolving and unpredictable industry and business model, management of growth and the other uncertainties described in this report. If our assumptions regarding these risks and uncertainties are incorrect or these risks and uncertainties change due to fluctuations in our markets, or if we do not address these risks successfully, our operating and financial results could differ materially from our expectations and our business could suffer.

Our industry is subject to rapidly changing technology and new and increasing amounts of scientific data, and if we fail to keep pace with these technological advances, we may be unable to compete effectively and our business and prospects could suffer.

In recent years, there have been numerous advances in the ability to analyze large amounts of genomic information and the role of genetics and gene variants in disease diagnosis and treatment. Our industry has been, and we believe will continue to be, characterized by rapid technological change, increasing amounts of data, frequent introductions of new genetic tests and evolving industry standards, all of which could make our tests obsolete if we are not able to enhance our technologies and tests faster and better than our competitors. We believe our future success will depend in part on our ability to keep pace with the evolving needs of our customers in a timely and cost-effective manner and to pursue new market opportunities that develop as a result of technological and scientific advances. If we are not able to keep pace with these advances and increased customer expectations that develop as a result of these advances, we may be unable to sustain or grow our business and our future operations and prospects could suffer.

Our mix of customers can fluctuate from period to period, 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 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 any key customers, and, as a result, any or all of them could decide at any time to 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 genetic testing demand from period to period in the ordinary course of their operations, these demand fluctuations, particularly for any key customers, can have a significant impact on our period-to-period performance regardless of their cause. In addition, the failure of any one of our customers or their payors to pay on a timely basis would negatively impact 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 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.

If we are not able to grow and diversify our customer base and increase demand for our tests from existing and new customers, our potential for growth could be limited.

To achieve our desired revenue growth, we must increase test volume by further penetrating our existing hospital and medical institution customers. In addition, we must grow our customer base beyond hospitals and medical institutions and into additional customer groups, such as individual physicians, other practitioners and research institutions. To this end, we are making efforts to diversify our customer market, including building relationships with research institutions and other similar institutional customers, a national clinical laboratory, regional medical networks and various other organizations to facilitate access to physicians, practitioners and other new customer groups, including certain U.S. government agencies. 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, none of these relationships 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 and without prior notice. As a result, our efforts to pursue these or other new customer markets could fail, and even if we are able to develop relationships with new customers in these or any other new customer groups, these relationships may not lead to meaningful or any increases in our customer base, the number of billable tests we deliver or our revenue, and may not improve our ability to achieve or sustain profitability.

We may fail to obtain the customer growth needed to grow volumes and revenue levels as desired or anticipated or at all, which could occur for a variety of reasons, including, among others:

- the genetic testing market generally, and particularly the market for next generation sequencing or NGS, genetic tests, is relatively new and may not grow as predicted or may decline;
- our efforts to improve our existing tests and develop and launch new tests may be unsuccessful;
- we may not be able to convince additional hospitals and medical institutions or additional customer groups of the utility of our tests and their potential advantages over existing and new alternatives;
- our investments in our sales and marketing functions, including our efforts to increase and restructure our sales force and re-focus and expand our marketing initiatives and strategies, may fail;
- we may be unsuccessful in convincing customers of the benefits of our broad and customizable test menu;
- genetic testing is expensive and many existing and potential new customers may be sensitive to pricing, particularly if we are not able to maintain low prices relative to our competitors;
- potential new customers, particularly individual physicians and other practitioners, may not adopt our tests if coverage and adequate reimbursement are not available;
- negative publicity or regulatory investigations into the actions of companies in our industry could raise doubts about the legitimacy of diagnostic technologies generally, and could result in scrutiny of diagnostic activities by the U.S. Food and Drug Administration, or FDA or other applicable government agencies; and
- our competitors could introduce new tests that cover more genes or that provide more accurate or reliable results.

If we are unable to address these and other risks associated with growing our customer base and deepening our relationships with existing customers, we may not achieve our desired growth in billable tests and our results of operations could be adversely impacted.

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

With the development of NGS, the clinical genetic testing market has become increasingly competitive, and we expect this competition to intensify further in the future. We face competition from a variety of sources, including, among others, dozens of companies focused on molecular genetic testing services, such as specialty and reference laboratories that offer traditional single-gene and multi-gene tests, as well as established and emerging healthcare, information technology and service companies that may develop and sell competitive products or services, 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 testing we would otherwise perform for them. In this regard, continued development of, and associated 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, the biotechnology and genetic testing fields continue to undergo significant consolidation, permitting larger clinical laboratory service providers to increase cost efficiencies and service levels, resulting in more intense competition.

Many of our existing and potential future 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, better and more expansive 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. We may not be able to compete effectively against these organizations.

Additionally, increased competition and cost-saving initiatives on the part of government entities and other third-party payors could result in downward pressure on the price for genetic analysis and interpretation generally, which could harm our revenue levels and sales volume and our ability to gain market share. This downward pricing pressure could intensify in future periods if adoption of genetic testing becomes more widespread, and we may not be able to maintain acceptable margins on our sales if we are forced to reduce prices for our tests to try to remain competitive, especially if we are also experiencing increasing expenses as we make efforts to grow our business or otherwise meet customer demands. The occurrence of these risks could materially harm our ability to achieve or sustain profitability. In addition, competitors may be acquired by, receive investments from or enter into other commercial relationships with larger, well-established and well-financed companies if and as use of NGS for clinical diagnosis and preventative care increases. Further, companies or governments that effectively control access to genetic testing through umbrella contracts or regional preferences could promote our competitors or prevent us from performing certain tests in certain territories. If we are unable to compete successfully against current and future competitors for these or any other reasons, we may be unable to increase market acceptance and sales volume of our tests, which could prevent us from maintaining or increasing our revenue levels or achieving or sustaining profitability or could otherwise negatively affect our performance.

Our level of commercial success will depend in part on our ability to generate and grow sales with our sales and marketing team, strategies and partnerships, and we may be unsuccessful in these efforts.

We may not be able to market or sell our existing tests or any tests we may develop in the future in order to drive demand sufficiently to support our desired growth. We currently sell our tests through a small internal sales force and a number of contractors who serve as independent sales representatives. Although we have made efforts to enhance and improve our internal sales department, it remains significantly smaller than many of our competitors' sales teams. We have historically relied significantly on organic growth and word-of-mouth among our customers to generate interest in our tests, but our ability to rely on this type of interest in future periods is uncertain.

We believe our ability to maintain and grow sales volume in the future will depend in large part on our ability to further develop our sales team and create and implement effective sales and marketing strategies. We have been focused on these objectives and have taken steps to pursue them in recent periods, including hiring new key members and restructuring the organization of our sales and marketing team, re-focusing our sales and marketing initiatives and strategies and increasing the overall scope of our marketing activities. These efforts have required and will continue to involve significant time and expense. Moreover, these efforts may be unsuccessful. For instance, we may not be able to attract and hire the qualified personnel we need to grow or otherwise improve our sales and marketing team as quickly or as successfully as we would like for various reasons, including intense competition in our industry for qualified personnel and our relative lack of experience selling and marketing our tests. Even if we are able to further develop our sales and marketing team and strategy, and we may not be successful in growing our customer base or increasing order volumes from our existing customers. Further, our reliance on independent sales representatives subjects us to risks, as we have very little control over their activities and they are generally free to market and sell other, potentially competing, products. As a result, these independent sales representatives could devote insufficient time or resources to marketing and selling our tests, could market them in an ineffective manner or could otherwise be unsuccessful in selling adequate or expected quantities of our tests.

In addition, our future sales levels will depend in large part on the effectiveness of our sales and marketing strategies, including our ability to expand our brand awareness, by providing education about the benefits and full scale of our offering to the medical community in general and to our targeted geographic and customer markets. We also intend to continue to pursue targeted marketing initiatives, including working with medical professional societies to promote awareness of the benefits of our tests and genetic testing in general, pursuing or supporting scientific studies of our tests and publication of results in medical or scientific journals and making presentations at medical, scientific or industry conferences and trade shows. We may not be successful in implementing these initiatives or other marketing strategies we may develop and pursue. If we are not able to drive sufficient revenue using our sales and marketing strategies to support our planned growth, our business and results of operations would be negatively affected.

Our sales and marketing strategies also include a continued focus on growing our international sales and customer base, which we plan to pursue through our direct sales team, a number of independent contractor sales representatives, and, if opportunities arise, by engaging distributors or establishing other types of arrangements, such as joint ventures or other relationships, to manage or assist with sales, logistics, education or customer support in certain territories. To this end, we have worked with Xi Long USA, Inc., or Xi Long, a large stockholder of our company, to form a joint venture in the second quarter of 2017, which we refer to as FF Gene Biotech, to offer genetic testing to customers in the People's Republic of China, or PRC. Although we believe this joint venture could result in expanded long-term opportunities to address the genetic testing market in Asia, these expectations could turn out to be wrong and we may never realize the benefits we anticipate from this joint venture. While it may become necessary to identify, qualify and engage other commercial partners or distributors with local industry experience and knowledge in order to effectively market and sell our tests outside the United States, we have not established any such relationships to cover any non-U.S. territories, except for this joint venture in the PRC. As a result, we may not be successful in finding, attracting and retaining qualified distributors or other commercial partners or we may not be able to enter into arrangements covering desired territories on favorable terms. In addition, sales practices utilized by distributors or other commercial partners that are locally acceptable may not comply with sales practices or standards required under U.S. laws that apply to us, which could subject us to additional compliance risks. If our sales and marketing efforts outside the United States are not successful, we may not achieve significant acceptance for our tests in international markets, which could materially and adversely impact our business operations.

We will need to invest in and expand our infrastructure and hire additional skilled personnel in order to support our desired growth, and our failure to effectively manage any future growth could jeopardize our business.

To increase the volume of tests we offer and deliver, we must invest in our infrastructure, including our testing capacity and information systems, enterprise software systems, customer service, billing and collections systems and processes and internal quality assurance programs. We will also need to invest in our workforce by hiring additional skilled personnel, including biostatisticians, geneticists, software engineers, laboratory directors and specialists, sales and marketing experts and other scientific, technical and managerial personnel to market, process, interpret and validate the quality of results of our genetic tests and otherwise manage our operations. For example, before we deliver a report for any of our genetic tests, the results summarized in the report must be reviewed and approved by a licensed and qualified laboratory director. We currently have two of such laboratory directors with all of the required licenses, including Dr. Han Lin Gao. We may need to hire more licensed laboratory directors in the future to further scale our business. If we fail to hire additional qualified personnel when needed or otherwise develop our infrastructure sufficiently in advance of demand or if we fail to generate demand commensurate with our level of investment in our infrastructure, our business, prospects, financial condition and results of operations could be adversely affected. Additionally, although we do not presently have plans to acquire new or expand our existing laboratory space, we may need to do so in the future if our test volume increases, and any need to obtain an additional facility or replace our existing facility with a larger one could involve significant costs and challenges.

The time and resources required to implement new systems, to add and train new skilled personnel and to expand or acquire new laboratory space as needed are uncertain. Any future growth we may experience could create a strain on our organizational, administrative and operational infrastructure, including laboratory operations, quality control, customer service, sales and marketing and management. We may not be able to maintain the quality of or expected turnaround times for our tests or satisfy customer demand if and when it grows. Our ability to effectively manage any growth we experience will also require us to continue to improve our laboratory and other operational, financial and management systems and controls and our reporting processes and procedures, which may involve significant time and costs and which we may not be able to do successfully.

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

Since starting our genetic testing business, we have been focused primarily on providing our tests to hospitals and medical institutions. These customers typically pay for the cost of our tests using funds reimbursed in connection with a patient's diagnosis related group, or DRG. However, our ability to collect payment for the tests we deliver to our hospital and medical institution customers, as well as to other types of customers, is subject to a number of risks, many of which are not within our control. These risks include the potential for default or bankruptcy by the party responsible for payment and other risks associated with payment collection generally. 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 affect our collection rates. For example, because reimbursement under a DRG is typically provided at a fixed amount intended to cover all services provided to the patient, the cost of

our tests may be viewed to limit the profitability of the billing institution. If we are unable to convince hospitals and medical institutions of the value and benefit provided by our tests, or if the amount reimbursed under these DRG codes is decreased, these customers may slow, or stop altogether, their purchases of our tests. Moreover, our ability to collect payment for our tests in a timely manner or at all may decline to the extent we expand our business into new customer groups, including individual physicians and other practitioners, from which collection rates are often significantly lower than hospitals and medical institutions and which involve substantial additional risks that are discussed in these risk factors below. Any inability to maintain our past payment collection levels could cause our revenue and ability to achieve profitability to decline.

If third-party payors do not provide coverage and adequate reimbursement for our tests, our potential for growth could be limited.

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 genetic tests we perform can be limited and uncertain. Although our existing customer base consists primarily of hospitals and medical institutions, from which we typically receive direct payment for ordered tests, we believe our potential for future growth is dependent on our ability to attract new customer groups, including individual physicians and other practitioners. These practitioners may not order our tests 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, there would typically be a greater co-insurance or co-payment requirement from the patient for whom the test is ordered or the patient may be forced 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 number of tests we sell and our revenue will depend in part on our ability to achieve broad coverage and reimbursement for our tests from third-party payors.

Coverage and reimbursement by a third-party payor may depend on a number of factors, including a payor's determination that a test 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 or reimbursed 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 genetic tests we perform and may not enable coverage and adequate reimbursement rates for our tests. If physicians fail to provide appropriate codes for desired tests, we may not be reimbursed 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 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 a regional physician services organization and a national health insurance company to become an in-network provider and enrolled as a supplier in the Medicare program and 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 means that we have agreed with these payors to provide certain of our tests at negotiated 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 physician customer base or the number of billable tests we sell to physicians. 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 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 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 healthcare 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.

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 offering and develop and sell new tests. We may not be successful in launching or marketing any new tests we may develop, and, even if we are successful, the demand for our other tests could decrease or may not continue to increase at historical rates due to sales of the new tests. Our pipeline of new tests is in various stages of development and will be time-consuming and costly to fully develop and introduce, 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. Further, 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 and 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. In addition, we have established FF Gene Biotech to offer genetic testing to customers in the PRC. 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 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 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 uncertainty in light of 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 ventures or other arrangements we may establish or any distributors or other commercial partners we may engage to obtain any regulatory approvals required to market, sell and use our tests in various countries;

- challenges predicting the market for genetic testing 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 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, including increased risk with respect to the Canadian dollar after we recently started billing certain of our Canadian hospital customers in their local currency and with respect to the renminbi, or RMB, related to revenue received under our agreements with FF Gene Biotech;
- risks relating to conversion and repatriation of certain foreign currencies, particularly the RMB, which is subject to legal procedures and restrictions on currency conversion and movement outside the PRC and which could impact our ability to receive the anticipated financial benefits of our FF Gene Biotech joint venture;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts and other business restrictions;
- regulatory and compliance risks related to applicable data protection laws, including requirements to provide access to and deletion of certain data and respond to data breaches in compressed timeframes pursuant to these laws; 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 efforts to access customers in the PRC with the formation of FF Gene Biotech. 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; our lack of control over FF Gene Biotech due to our non-majority ownership interest; and many of the other risks of doing business internationally that are discussed above. Further, we could experience declines in our direct sales to, and revenue from, customers in Asia if any of these customers choose to order genetic tests from FF Gene Biotech instead of from us. As a result of these risks, although we believe FF Gene Biotech 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 this joint venture. Moreover, FF Gene Biotech or any other joint venture we may seek to establish may never produce sufficient revenue to 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 related to FF Gene Biotech 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 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 and overlapping networks of genes and symptoms can be implicated in multiple conditions. As a result, 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, 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.

If our sole laboratory facility becomes inoperable, if we are forced to vacate the 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 all of our tests at a single laboratory in Temple City, California. Our laboratory facility could be damaged or rendered inoperable by natural or man-made disasters, including earthquakes, floods, fires and power outages, 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 our 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 move to a different facility or obtain additional laboratory space, we may have difficulty locating suitable space in a timely manner, on reasonable terms or at all, and 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 we use 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 a limited number of suppliers and, in some cases, a sole supplier, for certain of our 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 of our laboratory substances, including reagents, as well as for the sequencers 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. We do not have long-term agreements with any of our suppliers and, as a result, they could cease supplying these materials and equipment 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 for other reasons, or they could fail to provide us with sufficient quantities of materials that meet our specifications. 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 some of the 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 we require for our tests, our operations could be materially disrupted and our business, financial condition, results of operations and reputation could be adversely affected.

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 bill various different parties for our tests, including customers directly in the case of our hospital and medical institution customers, as well as 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 the billing process complex, including:

- 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 and we have engaged a third party to assist with some of these 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.

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.

Actual or attempted security breaches, loss of data or other disruptions could compromise sensitive information related to our business or to patients or prevent us from accessing critical information, any of which could expose us to liability and adversely affect our business and our reputation.

In the ordinary course of our business, we generate, collect and store sensitive data, including protected health information, or 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. We face a number of risks related to protecting this information, including loss of access, unauthorized modification or inappropriate disclosure.

The secure processing, storage, maintenance and transmission of this information are 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, our information technology and infrastructure could fail, be inadequate or vulnerable to attacks by hackers or viruses or be breached due to employee error, malfeasance or other disruptions. A breach or interruption could compromise our information systems and the information we store could be accessed by unauthorized parties, manipulated, publicly disclosed, lost or stolen. Any such unauthorized access, manipulation, disclosure or other loss of information could result in legal claims or proceedings and could result in 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 harsh penalties, 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 failure of these systems, due to hardware or software malfunctions, delays in operation, failures to implement new or enhanced systems or cybersecurity breaches, could harm our business." The occurrence of any of these risks could materially adversely affect our business.

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

Our success depends in large part on the skills, 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, and Dr. Gao, our Chief Scientific Officer and Laboratory Director. The continued efforts of these persons will be critical to us as we continue to develop our technologies and test processes and focus on growing our business. If we lose one or more key executives, we could experience difficulties maintaining our operations, including the ability to deliver reports to customers after review and approval by a licensed and qualified laboratory director, competing effectively, advancing our technologies, developing new tests and implementing our business strategies. All of our executives and employees, including Mr. Hsieh and Dr. Gao, are at-will, which means either we or the executive or employee may terminate their employment at any time. We do not carry key man 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 depends 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.

Any inability to obtain additional capital when needed and on acceptable terms may limit our ability to execute our business plans.

We expect our capital expenditures and operating expenses to increase over the next several years as we seek to expand our infrastructure, sales and marketing and other commercial operations and research and development activities. We may seek to raise additional capital through securities offerings, credit facilities or other debt financings, asset sales or collaborations or licensing arrangements. Additional funding may not be available to us when needed, on acceptable terms or at all. If we raise 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 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.

We may 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, dilute our stockholders' ownership or cause us to incur debt or significant expense.

As part of our business strategy, we may pursue acquisitions of complementary businesses or assets, investments in other companies, technology licensing arrangements, joint ventures or other strategic relationships. As an organization, we have limited experience with respect to acquisitions, investments or the formation of strategic relationships or joint ventures. If we make acquisitions in the future, we may not be able to successfully integrate the acquired businesses or technologies into our existing operations, we could assume unknown or contingent liabilities and we could be forced to record significant write-offs or incur debt as a result of the acquisitions, any of which could harm our operating results. 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. If we pursue relationships with pharmaceutical companies or other strategic relationships, our ability to establish and maintain these relationships could be challenging due to several factors, including competition with other genetic 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 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 such transaction sufficiently 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. 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." 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.

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

We depend on critical, complex, and interdependent 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 Internet-based software 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, the outbreak of war or acts of terrorism. Moreover, despite network security and back-up measures, our servers and other electronic systems are potentially vulnerable to cybersecurity breaches, such as physical or electronic break-ins, computer viruses 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, there may be significant downtime or failures of these systems or those used by our third-party service providers. Any such downtime or failure could prevent us from conducting tests, preparing and providing reports to customers, billing payors, responding to customer inquiries, conducting research and development activities, maintaining our financial and disclosure controls and other reporting functions and managing the administrative aspects of our business. Moreover, any such downtime or failure could force us to transfer data collection operations to an alternate provider of server-hosting services, which could involve significant costs and result in further delays in our ability to conduct tests, deliver reports to our customers and otherwise manage our operations. Further, although we carry property and business interruption 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.

Any such disruption or security breach, as well as any action by us or our employees or contractors that might be inconsistent with the rapidly evolving data privacy and security laws and regulations applicable within the United States and elsewhere we conduct business, could result in enforcement actions by U.S. states, the U.S. federal government or foreign governments, liability, or sanctions under data protection laws that protect personal information, regulatory penalties, other legal proceedings such as but not limited to private litigation, the incurrence of significant remediation costs, disruptions to our development programs, business operations, and collaborations, diversion of management efforts, and damage to our reputation, which could harm our business and operations. Because of the rapidly moving nature of technology and the increasing sophistication of cybersecurity threats, our measures to prevent, respond to, and minimize such risks may be unsuccessful.

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.

We rely on commercial courier delivery services to transport specimens to our laboratory facility in a timely and cost-efficient manner, and if these delivery services are disrupted, our business would be 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, for analysis at our Temple City, California laboratory. Disruptions in delivery service, whether due to labor disruptions, bad weather, natural disasters, 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 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 adversely affected.

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 2018, we will need to maintain and enhance them if and as we grow and, we may need to hire additional personnel and devote more resources to our financial reporting function in order to do so.

If we identify one or more material weaknesses during the process of annually evaluating our internal controls, we may not detect errors on a timely basis and 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. Further, when we are no longer an emerging growth company or smaller reporting company, as described in the risk factors below, our independent registered public accounting firm will be required to issue an attestation report on the effectiveness of our internal control over financial reporting. When that occurs, our independent registered public accounting firm may conclude that there are material weaknesses in our internal controls or the level at which our internal controls are documented, designed, implemented or reviewed even if our management concludes that our internal control over financial reporting is effective.

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.

We may elect to comply with reduced public company reporting requirements available to us because we are an emerging growth company and a smaller reporting company, which could make our common stock less attractive to investors.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012, as amended, or JOBS Act, and we will remain an emerging growth company until December 31, 2021, unless, before that date, our gross revenue exceeds $1.07 billion in any fiscal year, we issue more than $1.0 billion of non-convertible debt in any three-year period or the market value of our common stock held by non-affiliates exceeds $700 million as of the last business day of the second fiscal quarter of any fiscal year. In addition, beginning in 2018, we are a smaller reporting company, as defined in applicable SEC rules, and we will remain a smaller reporting company until the market value of our common stock held by non-affiliates, or public float, equals or exceeds $250 million. When and if our public float exceeds $250 million, we may still qualify to report as a smaller reporting company provided our public float is less than $700 million and our annual revenues are less than $100 million for the year preceding the date of determination. As an emerging growth company, we are eligible for exemptions from certain reporting requirements applicable to other public companies, including an exemption from the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced financial statement and other financial disclosure requirements in registration statements and periodic reports we file, reduced disclosure obligations regarding executive compensation and, so long as we remain an emerging growth company, exemption from the requirements to hold non-binding advisory votes on executive compensation and obtain stockholder approval of any golden parachute payments not previously approved. We have relied on many of these exemptions in our registration statements and periodic reports to date, and investors may find our common stock less attractive if we choose to continue to rely on these exemptions, in which case there may be a less active trading market for our common stock and our stock price may be more volatile.

Under the Securities Act of 1933, as amended, or Securities Act, emerging growth companies can elect to delay adoption of new or revised accounting standards until those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption and, as a result, we are subject to the same new or revised accounting standards at the same time as other public companies that are not emerging growth companies.

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 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, there are no significant regulatory or judicial interpretations of these laws and regulations. Pursuant to its authority under the federal Food, Drug, and Cosmetic Act, or FDC Act, the FDA has jurisdiction over medical devices, including potentially our 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, 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 has 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. In December 2018 members of Congress released a discussion draft of a bill to regulate LDTs. The FDA has also solicited public input and published two draft guidance documents relating to FDA oversight of NGS-based tests. These two draft guidance documents describe the FDA's thinking and proposed approach regarding the possible use of FDA-recognized standards to support analytical validity, and public human genetic variant databases to support clinical validity, of these tests. Until the FDA finalizes its regulatory position regarding LDTs and NGS-based tests, or legislation is passed concerning 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 begins to enforce its medical device requirements for LDTs or if the FDA disagrees with our assessment that our tests are LDTs or if Congress passes new LDT legislation, 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 pre-market 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 the Clinical Laboratory Improvement Amendments of 1988, or 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 or experience 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 laboratory examinations 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 healthcare programs, as well as many private third-party payors, for our tests. We have obtained CLIA certification to conduct our tests at our laboratory in Temple City, California. To renew this certification, we are subject to survey and inspection every two years and we may be subject to additional unannounced inspections.

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, including with respect to the training and skills required of personnel, quality control and proficiency testing requirements. In addition, 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.

In addition to CLIA requirements, we elect to participate in the accreditation program of the College of American Pathologists, or CAP. The Centers for Medicate and Medicaid Services, or 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 the CAP Laboratory Accreditation Program, we are deemed to also comply with CLIA. While not required to operate a CLIA-certified laboratory, many private insurers require CAP accreditation as a condition to contracting with clinical laboratories to cover their tests. In addition, some countries outside the United States require CAP accreditation as a condition to permitting clinical laboratories to test samples taken from their citizens. Failure to maintain CAP accreditation could have a material adverse effect on the sales of our tests and the results of our operations.

We are subject to broad legal requirements regarding the information we test and analyze, and any failure to comply with these requirements could result in harsh penalties, 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 health information, including the federal Health Insurance Portability and Accountability Act of 1986, or HIPAA, the federal Health Information Technology for Economic and Clinical Health Act, or 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, all 50 states have passed laws regulating the actions that a business must take if it experiences a data breach, such as prompt disclosure to affected customers. Congress is also considering federal data protection legislation. In addition to enforcement of HIPAA and HITECH by the Office of Civil Rights of the Department of Health and Human Services, state Attorneys' General have increased HIPAA and HITECH enforcement activity in connection with data breaches of health information. The Federal Trade Commission 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 Federal Trade Commission Act. In addition to data breach notification laws, all 50 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 or with those of state laws vary significantly depending on the failure and could include civil monetary or criminal penalties.

The European Union formally adopted the General Data Protection Regulation, orGDPR, in 2016, which applies to all European Union member states from May 25, 2018 and replaced the European Data Protection Directive. The GDPR also includes new operational requirements for companies that receive or process personal data of European residents, as well as significant penalties for non-compliance, including large fines and potential sanctions. The regulation introduces stringent new data protection requirements in the European Union and 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 have been required to put in place additional mechanisms ensuring compliance with the new European data protection rules. While we have taken steps to comply with the GDPR, we cannot assure you that our efforts to remain in compliance will be fully successful. 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. 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.

In addition, 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 they may become more stringent over time. 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 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 government enforcement actions (including the imposition of significant penalties), civil or criminal penalties for us and our officers and directors, private litigation, any of which could also harm our reputation and materially adversely affect 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 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:

- the FDA's enforcement discretion with respect to LDTs;
- CLIA's and CAP's regulation of our laboratory activities;
- federal and state laws and standards affecting reimbursement by government payors, 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 healthcare 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 laws, which generally impose 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 federal Civil Monetary Penalties Law, which generally prohibits, among other things, the offering or transfer of remuneration to a Medicare or state healthcare program beneficiary if it is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of services reimbursable by Medicare or a state healthcare program;
- the Affordable Care Act, which, among other things, establishes a requirement for providers and suppliers to report and return any overpayments received from government payors under the Medicare and Medicaid programs;
- other federal and state fraud and abuse laws, such as anti-kickback laws including the 2018 Eliminating Kickbacks in Recovery Act, 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 insurers;
- the federal Physician Sunshine Payment Act and various state laws on reporting relationships with healthcare providers and customers, which could be determined to apply to our LDTs;
- the prohibition on reassignment of Medicare claims;
- 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 federal 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.

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.

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. Additionally, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. 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 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. Any of these consequences could seriously harm our business and our financial results.

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 Affordable Care Act made a number of substantial changes to the way healthcare is financed both by governmental and private insurers. For example, the Affordable Care Act requires each medical device manufacturer to pay an excise tax on the medical devices it sells. The medical device tax has been suspended through 2019. It is unclear at this time when, or if, sales of our LDTs will trigger the medical device tax, and it is possible that this tax will apply to some or all of our existing tests or tests we may develop in the future. Additionally, the Affordable Care Act introduces 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 Affordable Care Act 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 will be paid under Medicare. Under PAMA, certain clinical laboratories are required to periodically report to CMS private payor payment rates and volumes for their tests. Laboratories that fail to report the required payment information may be subject to substantial civil monetary penalties. Further, effective January 1, 2018 under PAMA, Medicare reimbursement for diagnostic tests will be based on the weighted-median of the payments made by private payors for these tests, rendering private payor payment levels even more significant. 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 new payment system on rates for our tests, including any current or future tests we may develop, is uncertain.

We cannot predict whether or when these or other recently enacted healthcare initiatives will be implemented at the federal or state level or how any such legislation or regulation may affect us. For instance, the payment reductions imposed by the Affordable Care Act and the changes to reimbursement amounts paid by Medicare for tests such as ours based on the procedure set forth in PAMA, could limit the prices we will be able to charge or the amount of available reimbursement for our tests, which would reduce our revenue. Additionally, these healthcare policy changes could be amended or additional healthcare initiatives could be implemented in the future. For instance, there is uncertainty regarding the continued effect or the Affordable Care Act in its current form following the results of the 2016 U.S. presidential election and in light of the policies of the current administration, which has threatened to repeal, replace or change the Affordable Care Act. 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.

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.

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 they 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.

Intellectual Property Risks

We currently own no patents or patent applications related to our technology platform and 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 they 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.

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 genetic testing. 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 when needed, on commercially reasonable terms 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 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.

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

From time to time, the U.S. 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 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 the 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."

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.

Common Stock Risks

An active, liquid trading market for our common stock may never develop, which could make it difficult for stockholders to sell their shares of our common stock.

An active trading market for our common stock may never develop, or if developed, may not be sustained. Further, Mr. Hsieh, our founder, Chief Executive Officer and Chairman of our board of directors, beneficially owns close to half of our outstanding voting equity. 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 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 genetic testing, 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 following the results of the 2016 U.S. presidential election;
- 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 the company. This type of litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

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 the substantial majority of our outstanding voting equity, and of this, Mr. Hsieh, our founder, Chief Executive Officer and Chairman of our board of directors, by himself beneficially owns close to half of our outstanding voting equity. 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. All 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. Moreover, after May 16, 2019, Xi Long, a large stockholder of our company, has the right, subject to certain conditions, to include its shares in registration statements we may file for ourselves or other stockholders and to require us to file registration statements covering its shares.

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 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 1,000,000 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 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 1,000,000 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 provides 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 or proceeding brought on our behalf;
- any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or to our stockholders;
- any action asserting a claim against us arising pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws; and
- any action asserting a claim against us governed by the internal affairs doctrine.

Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock is deemed to have notice of and consented to this provision of our certificate of incorporation. This choice-of-forum provision 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, if a court were to find this provision of our certificate of incorporation inapplicable to, or unenforceable in respect of, 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.

None.

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 2021. The Company has options to renew some of these leases for three years. We use these facilities for all of our laboratory testing and management activities and certain research and development, administrative and other functions. We also lease approximately 1,400 square feet of office space near Atlanta, Georgia under a lease that will expire in August 2020 and approximately 11,600 square feet of office space in El Monte, California under a lease that will expire in August 2023, where we conduct certain research and development, customer service, report generation and other administrative activities, although no laboratory activities occur at either of these facilities. 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. We are not presently a party, and our properties are not presently subject, to any legal proceedings that, in the opinion of management, would have a material effect on our business. 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 the Nasdaq Global Market under the symbol "FLGT." There was no public market for our common stock prior to September 29, 2016.

Holders of Common Stock

As of March 1, 2019, there were 7 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

On October 4, 2016, we completed the initial public offering of our common stock, or the IPO, in which we issued and sold an aggregate of 4,830,000 shares of common stock (including 630,000 shares issued and sold on October 7, 2016 pursuant to the underwriters' exercise in full of their option to purchase additional shares) at a public offering price of $9.00 per share. We received net proceeds of approximately $36.0 million, after deducting underwriting discounts and commissions and offering expenses paid or payable by us of approximately $4.4 million. The shares issued and sold in the IPO were registered under the Securities Act on a registration statement on Form S-1 (File No. 333-213469), as amended, and the final prospectus dated September 28, 2016 included in such registration statement, or the Prospectus.

To date, we have used $5.9 million of the net proceeds from the IPO, of which, $3.0 million was used for contributions to our joint venture, FF Gene Biotech in partial satisfaction of our contribution obligations under the joint venture cooperation agreement, and $2.9 million was used to fund the Company's operation. All other net proceeds from the IPO are invested in investment-grade, interest-bearing securities, such as money market accounts, certificates of deposit, commercial paper and guaranteed obligations of the U.S. government. There has been no material change in the planned use of proceeds from the IPO from that described in the Prospectus.

Item 6. Selected Financial Data.

Not applicable.

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

On September 30, 2016, Fulgent Therapeutics LLC became a wholly owned subsidiary of Fulgent Genetics, Inc. in a transaction we refer to as the Reorganization. As used in the following discussion and analysis, unless the context otherwise requires, (i) the term "Fulgent LLC" refers to Fulgent Therapeutics LLC, (ii) the term "Fulgent Inc." refers to Fulgent Genetics, Inc. and (iii) the terms "Fulgent," the "company," "we," "us" and "our" refer, for periods prior to completion of the Reorganization, to Fulgent LLC and, for periods after completion of the Reorganization, to Fulgent Inc. and its consolidated subsidiaries after giving effect to the Reorganization. Following the Reorganization, Fulgent Inc. is a holding company with no material assets other than 100% of the equity interests in its subsidiaries, including Fulgent LLC, and Fulgent LLC is considered Fulgent Inc.'s predecessor for accounting purposes and Fulgent LLC's financial statements for all periods prior to completion of the Reorganization constitute Fulgent Inc.'s historical financial statements. In this discussion and analysis, Fulgent LLC's equity interests are referred to as "units" and Fulgent LLC's equity holders are referred to as "members."

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.

Forward-Looking Statements

The following discussion and analysis contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. 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 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 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 discussion and analysis 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.

Overview

We are a growing technology company with an initial focus on offering comprehensive genetic testing to provide physicians with clinically actionable diagnostic information they can use to improve the quality of patient care. We have developed a proprietary technology platform that allows us to offer a broad and flexible test menu and continually expand and improve our proprietary genetic reference library, while maintaining accessible pricing, high accuracy and competitive turnaround times. We believe our test menu offers more genes for testing than our competitors in today's market, which enables us to provide expansive options for test customization and clinically actionable results. Our test menu currently includes approximately 18,000 single-gene tests and more than 900 pre-established, multi-gene, disease-specific panels that collectively test for approximately 7,600 genetic conditions, including various cancers, cardiovascular diseases, neurological disorders and pediatric conditions.

Our existing customer base consists primarily of hospitals and medical institutions, which are typically frequent and high-volume users of genetic tests and which often pay us directly for our tests. We believe our relationships with these customers provide a meaningful opportunity for further growth, as we seek to deepen these relationships and drive increased ordering. We also believe our offering could be attractive to other types of customers, including individual physicians and other practitioners, regional medical networks, research institutions and other organizations, and we are building relationships in these new customer markets. Although we have devoted fewer overall resources to sales and marketing efforts than many of our competitors, we made material investments in our sales and marketing team and strategies, the global reach of our business and other aspects of our operations in 2017, and we believe these investments could help stimulate further demand in the long-term.

We offer tests at competitive prices, averaging approximately $958 per billable test delivered in 2018, and at a lower cost to us than many of our competitors, averaging approximately $480 per billable test delivered in 2018. Our volume has grown rapidly since our commercial launch, with 22,298 billable tests delivered in 2018, 16,578 billable tests delivered in 2017, and an aggregate of over 59,201 billable tests delivered to approximately 980 customers from inception through December 31, 2018. We have experienced compound quarterly growth of 5.4% in the number of billable tests delivered in our last eight completed fiscal quarters. We recorded revenue and loss from operations of $21.4 million and $5.6 million, respectively, in 2018, compared to revenue and loss from operations of $18.7 million and $2.5 million, respectively, in 2017. We achieved profitability in the first three months of 2017, but we have recorded losses in all other periods since our inception.

2017 Developments

FF Gene Biotech Joint Venture

On April 25, 2017, we, through an affiliated company formed for the purpose of the relationship, entered into a cooperation agreement with Xilong Scientific Co., Ltd., or Xilong Scientific, and Fuzhou Jinqiang Investment Partnership (LP), or FJIP, to form a joint venture under the laws of the People's Republic of China, or PRC, called Fujian Fujun Gene Biotech Co., Ltd. or FF Gene Biotech. FF Gene Biotech offers genetic testing services to customers in the PRC. Pursuant to the terms of the cooperation agreement, we have agreed to contribute to FF Gene Biotech genetic sequencing and other equipment with a total cost of 60,000,000 renminbi, or RMB, over a three-year period for a 30% ownership interest in FF Gene Biotech, Xilong Scientific has agreed to contribute to FF Gene Biotech 102,000,000 RMB over a three-year period for a 51% ownership interest in the FF Gene Biotech, and FJIP has agreed to contribute to FF Gene Biotech 19,000,000 RMB over a five-year period for a 19% ownership interest in FF Gene Biotech. As of December 31, 2018, 40,300,000 RMB (or approximately $5.9 million U.S. dollars) of our total contribution obligation remains to be contributed to FF Gene Biotech under the terms of the cooperation agreement. To date, we have purchased and contributed to FF Gene Biotech equipment with an aggregate fair value of $3.0 million pursuant to our contribution obligations under the cooperation agreement, of which, $510,000 and $2.5 million were contributed in 2018 and 2017, respectively.

Additionally, on April 25, 2017, we entered into a license agreement with FF Gene Biotech, pursuant to which we have granted to FF Gene Biotech a license to use certain of our clinical molecular diagnostic gene detection technology and related software and our proprietary reference library of genetic information, along with any improvements on this technology we may develop during the term of the license agreement. Under the license agreement, FF Gene Biotech will pay to us, on a quarterly basis, certain royalties based on the revenue of FF Gene Biotech, and we have agreed to provide certain technical services to FF Gene Biotech in connection with the license granted under the agreement. The license agreement expired on December 31, 2018. We recorded $76,000 royalties under the license agreement in the year ended December 31, 2018, and minimal royalties under the license agreement was recorded in the year ended December 31, 2017.

We believe FF Gene Biotech could expand our long-term opportunities to address the genetic testing market in Asia. However, establishing FF Gene Biotech and our relationships with this joint venture are subject to a number of risks, including market, regulatory and other factors that could cause the joint venture to fail to produce to us the revenue or other benefits we anticipate, or a potential decline in our direct sales to customers in Asia if any of these customers choose to order genetic tests from FF Gene Biotech instead of from us.

2018 Developments

Partnered with Columbia University Irving Medical Center on Expanded Carrier Screening

The Company and the Precision Genomics Laboratory, or PGL, in collaboration with the Department of Obstetrics and Gynecology, at Columbia University Irving Medical Center, or CUIMC, entered into a license and commercialization agreement to make on site performed, expanded carrier screening available to Columbia patients. This unique collaboration will leverage both parties' expertise in laboratory management, bioinformatics, clinical genetics and next-generation sequencing to deliver an expanded carrier screening test with many advantages over other currently available tests.

The PGL is jointly operated by the Institute for Genomic Medicine, or IGM, and the Department of Pathology and Cell Biology and is designed to enhance patient care through genomic diagnostics, research, and education at CUIMC.

Carrier screening is a genetic test used to identify whether individuals and carrier couples are at risk for passing genetic disorders to their children. These genetic disorders may result in physical disabilities, cognitive impairment, and other severe health problems in newborn babies. Traditionally, carrier screening tests targeted couples of certain ethnic groups that have historically been at higher risk for specific genetic disorders. This approach has presented difficulties for patients who are multiracial, adopted, or are unsure of their ethnic backgrounds. To address this challenge, expanded carrier screening, or ECS, was developed to test for mutations that cause hundreds of different genetic disorders regardless of a patient's ethnicity. Professional medical associations like the American College of Obstetricians and Gynecologists, or ACOG, and the American College of Medical Genetics and Genomics, or ACMG, have published guidelines on ECS and its importance in reproductive care.

Factors Affecting Our Performance

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 next generation sequencing, or 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 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.

Number and Mix of Billable Tests Delivered

Our performance is closely correlated with the number of tests for which we bill our customers, which we refer to as billable tests. The number of billable tests we deliver in any period depends on a number of factors, including the other factors affecting our performance described in this discussion and analysis. We believe the number of billable tests that we deliver is an important indicator of the performance of our business.

In addition, 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 billable tests delivered in any period, and the customers that order these tests, impacts our financial results for the period.

Mix of Customers

Through December 31, 2018, we have sold our tests to approximately 980 total 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 genetic 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.

Our existing customer base consists primarily of hospitals and medical institutions, which are typically frequent and high-volume users of genetic tests. Additionally, collection of billings from these institutional customers is generally more attainable than from other types of customers in today's reimbursement environment, as approximately 78% of our test billings that were generated and due in 2018 were paid during that period. As a result, we believe our ability to maintain, strengthen and build this customer base could have a meaningful impact on our potential for growth.

We are also making efforts to diversify our customer market, including building relationships with research and other institutional customers, as well as a national clinical laboratory, regional medical networks and various other organizations to facilitate access to physicians, practitioners and other new customer groups, including certain U.S. military and other government agencies. 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. Subject to limited exceptions, none of these relationships obligate any party to order our tests at any agreed volume or frequency or at all, and as a result, these relationships may not lead to meaningful or any increases in our customer base, the number of billable tests we deliver or our revenue. However, we believe our ability to establish these relationships with new customer groups is critical to the growth of our business.

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 our recently-launched *Beacon* carrier screening panels and somatic cancer panels. In addition, all of our 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 per billable test 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.

We calculate our cost per billable test by dividing the number of billable tests delivered in any given period by our cost of revenue in the same period. 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 the amount of our cost per billable test. Moreover, changes in our other operating expenses, due to investments in these aspects of our business or other factors, are not taken into account in the calculation of this measure but impact our overall results, which can limit the utility of cost per billable test as an overall cost measurement tool.

Ability to Obtain Reimbursement

In today's market, third-party payors generally restrict the reimbursement of genetic testing to only a narrow subset of genetic tests and certain patients who meet specific criteria. The lack of widespread favorable reimbursement policies has presented a challenge for genetic testing companies in building sustainable business models. 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 with this payor group. 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 a national health insurance company 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 per billable test 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.

Impact of Certain Recent Accounting Pronouncements

The majority of our revenue is generated from hospitals, medical institutions and research institutions, with a lesser amount from reimbursement by third-party payors, including managed care organizations, private health insurers and government healthcare programs, such as Medicare and Medicaid. In 2017, 2016 and all other historical periods, we recognized revenue based on a revenue recognition standard that requires the satisfaction of specified criteria, including when the amount of revenue becomes fixed or determinable and when collectability of revenue is reasonably assured, in order to recognize the revenue. Under this standard, if all of

the required criteria were not satisfied before payment was received, then we recognized revenue on a cash basis, which means that revenue is recognized only when we receive a cash payment from a customer for the genetic tests it has ordered. As a result, for revenue received from hospitals and medical institutions, in general, we have recognized revenue upon our delivery to a customer of genetic test results from an ordered test, because all criteria to recognize this revenue have been satisfied at that time. For revenue received from third-party payors, in general, we have recognized revenue on a cash basis due to the inability to satisfy the criteria described above before receipt of payment.

Beginning on January 1, 2018, we are recognizing revenue pursuant to a comprehensive new revenue recognition standard based on several recent accounting pronouncements. Under the new standard, which is designed to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services, we expect to recognize revenue from all customers on an accrual basis, which means that revenue will be recognized at the time of delivery to customers of genetic test results from an ordered test based on our expectation of receiving a cash payment for such tests. In general, the new revenue recognition standard will result in our recognition of revenue from hospitals and medical institutions at a similar time as we recognized revenue from these customers under the prior standard, and will result in our recognition of revenue from third-party payors earlier than we recognized revenue from these customers under the prior standard.

Upon adopting the new standard on January 1, 2018, we recorded an adjustment of $327,000 to beginning accumulated deficit and accounts receivable to reflect genetic tests previously delivered to third-party payors for which revenue was not recognized as of such date.

Equity-Based Compensation

In January 2016, our predecessor Fulgent LLC granted an award of fully vested equity to one of our employees. The equity-based compensation expense associated with this award was recorded in full in the period in which the award was granted. As a result, there were substantially increased equity-based compensation expenses in 2016 than in 2017. We do not intend to grant additional awards of fully vested equity and, as a result, we did not experience similar levels of equity-based compensation expense in 2018. We do not expect we will experience similar levels of equity-based compensation expense in future periods. Generally, we record equity-based compensation over the requisite service period from the grant date of the applicable award.

Before the Reorganization, Fulgent LLC issued options that were not exercisable, whether or not vested, until the earlier of a liquidity event or an incorporation of Fulgent LLC, each as defined in Fulgent LLC's equity incentive plan under which the awards were granted. An incorporation was deemed to have occurred upon completion of the Reorganization on September 30, 2016, at which time the options became immediately exercisable, to the extent vested. As a result, no expense was recorded for these options prior to their exercisability, and equity-based compensation expense of $1.1 million was recorded for these options as of the completion of the Reorganization on September 30, 2016. See "Reorganization" below for more information.

Before the Reorganization, Fulgent LLC granted awards of units that constituted profits interests, which are a type of equity award containing a participation threshold that entitled the recipient of the award to participate in the value of Fulgent LLC only to the extent it appreciated from and after the grant date of the award. Pursuant to the determination of the Manager of Fulgent LLC, the participation thresholds applicable to units that constituted profits interests (i) were ignored and not applied in calculating the number of shares of our common stock that were issued in exchange for such units in the Reorganization, and (ii) did not carry over to such shares of our common stock. Ignoring all profits interest thresholds upon the conversion of the units that constituted profits interests into shares of our common stock in the Reorganization resulted in equity-based compensation expense of $1.4 million that we recorded as of the completion of the Reorganization on September 30, 2016. See "Reorganization" below for more information.

Foreign Currency Exchange Rate Fluctuations

Much 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. For instance, all of our revenue-producing transactions have historically been denominated in U.S. dollars, but we started billing certain of our Canadian hospital customers in their local currency in the second quarter of 2017, and we may expand this practice in the future to other customers in Canada or other international markets. Additionally, all payments we receive from FF Gene Biotech, including royalty revenue under the license agreement and our share of any earnings of the joint venture, are paid to us in RMB and then converted by us to U.S. dollars, and we expect these payments to increase in the future. These or other changes in the currencies in which we receive payments and record revenue could result in an increased impact in future periods of foreign currency translations and exchange rate fluctuations.

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 genetic tests. 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. We generally bill directly to a hospital, medical or research institution customer, or to a patient, a third-party payor or a combination of a patient and a third-party payor. Some of the revenue we generate relates to certain research services we provide for our research institution and other similar institutional customers, which we refer to as "sequencing as a service." The amount of research revenue recorded to date has been relatively small, but this amount increased in the third and fourth quarters of 2018 and we expect it may continue to grow. Relative to our other tests, we generally sell sequencing as a service tests may be sold at lower price points, resulting in less revenue to us for sales of the same number of tests, and we generally incur less cost of revenue in delivering these tests. As a result, an increase or decrease in orders of sequencing as a service tests as a percentage of our total billable tests delivered in any given period can materially impact our average price per billable test, revenue and cost of revenue in the period.

In addition, as a result of the establishment of FF Gene Biotech and our related license agreement with FF Gene Biotech in April 2017, we began recognizing royalties from FF Gene Biotech under the license agreement, the amount of which is based on the revenue levels of FF Gene Biotech. The license agreement expired on December 31, 2018. We recorded $76,000 royalties under the license agreement in the year ended December 31, 2018, and minimal royalties under the license agreement was recorded in the year ended December 31, 2017.

Cost of Revenue

Cost of revenue reflects the aggregate costs incurred in delivering test results, including sequencing as a service tests, 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 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 we increase the number of billable tests we deliver.

Operating Expenses

Our operating expenses are classified into three categories: research and development; selling and marketing; and general and administrative. For each category, 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. 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 increased general and administrative expenses as a result of completing our initial public offering in October 2016 and operating as a public company, including expenses related to compliance with the rules and regulations of the Securities and Exchange Commission, or the SEC, and the Nasdaq Stock Market, additional insurance expenses, investor relations activities and other administrative and professional services.

Provision for (Benefit from) Income Taxes

Provision for income taxes consists of U.S. federal and state income taxes. To date, we have not had significant U.S. federal and state income taxes because of the status of our predecessor Fulgent LLC as a pass-through entity for tax purposes. As a result, for all periods prior to the Reorganization, all taxable income or loss and tax credits of Fulgent LLC generally were reflected in the personal income tax returns of Fulgent LLC's members, and no provision for federal or state income taxes was provided in our consolidated financial statements. We became a taxable entity upon completion of the Reorganization on September 30, 2016.

We record a valuation allowance when it is more likely than not that some portion or all of a deferred tax asset will not be realized. In making such a determination, we consider all the available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, and ongoing prudent and feasible tax planning strategies, to assess the amount of the valuation allowance. When we determine to establish or reduce the valuation allowance against the deferred tax assets, our provision for income taxes will increase or decrease, respectively, in the period in which the determination is made.

The factors that most significantly impact our effective tax rate include the levels of certain deductions, including those related to equity-based compensation, the effect of state income taxes, and changes in tax laws. We expect these factors will continue to 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,		$	%
	2018	2017	Change	Change
Statement of Operations Data:	(dollars in thousands, except Other Operating Data)			
Revenue	$ 21,351	$ 18,730	$ 2,621	14%
Cost of revenue	10,697	8,551	2,146	25%
Gross profit	10,654	10,179	475	5%
Operating expenses:				
Research and development	5,534	4,223	1,311	31%
Selling and marketing	4,652	4,205	447	11%
General and administrative	5,538	5,233	305	6%
Total operating expenses	15,724	13,661	2,063	15%
Operating loss	(5,070)	(3,482)	(1,588)	46%
Interest and other income, net	434	481	(47)	-10%
Loss before income taxes and equity loss in investee	(4,636)	(3,001)	(1,635)	54%
Provision for (benefit from) income taxes	36	(1,015)	1,051	-104%
Loss before equity loss in investee	(4,672)	(1,986)	(2,686)	135%
Equity loss in investee	(935)	(524)	(411)	78%
Net loss	$ (5,607)	$ (2,510)	$ (3,097)	123%
Other Operating Data:				
Billable tests delivered(1)	22,298	16,578	5,720	35%
Average price per billable test delivered(2)	$ 958	$ 1,130	$ (172)	(15)%
Cost per billable test delivered(3)	$ 480	$ 516	$ (36)	(7)%

(1) We determine the number of billable tests delivered in a period by counting the number of tests which are delivered to our customers and for which we bill our customers and recognize some amount of revenue in the period.

(2) We calculate the average price per billable test delivered by dividing the amount of revenue we recognized from the billable tests delivered in a period by the number of billable tests delivered in the same period.
(3) We calculate cost per billable test delivered by dividing our cost of revenue in a period by the number of billable tests delivered in the same period.

Revenue

Revenue increased $2.6 million, or 14%, from $18.7 million in 2017 to $21.4 million in 2018. The increase in revenue between periods was primarily due to an increased number of billable tests delivered.

We believe the increase in the number of billable tests delivered between periods was primarily attributable to the expansion of our test menu, including the introduction of our *Beacon* carrier screening panel tests in the third quarter of 2017, an increase in sales to certain of our existing customers and an increase in sequencing as a service test orders, combined with growth in the genetic testing market and increased physician awareness and acceptance of genetic tests generally.

The average price of the billable tests we delivered decreased $172, or 15%, from $1,130 in 2017 to $958 in 2018. We believe this decrease was due to (i) the mix of tests we delivered in these periods, including more sequencing as a service and other lower price-point tests in 2018, (ii) our reduction of prices for certain of our tests due to general price degradation for genetic tests and other competitive factors in 2018, and (iii) the mix of customers ordering tests in these periods, which may order tests at different rates depending on the arrangements we have negotiated with them, and for which we may recognize different amounts of revenue at different times in the delivery and payment process based on the impact of our revenue recognition policy on, and differing collectability rates among, various customer groups.

Revenue from non-U.S. sources decreased $934,000, or 10%, from $9.7 million in 2017 to $8.8 million in 2018. The decrease in revenue from non-U.S. sources between periods was primarily due to decreased sales to customers in the PRC, which decreased revenue by $2.5 million, partially offset by an increase of $1.7 million in revenue from sales to customers in other countries. The decrease in sales to customers in the PRC was primarily attributable to decreased sales to two customers that contributed a significant portion of our revenue in the first quarter of 2017 but ordered significantly fewer tests and generated significantly less revenue to us in all other quarters of 2017 and 2018; going forward, we do not expect meaningful revenue from these two customers.

Aggregating customers that are under common control or are affiliates, one customer contributed 13% of our revenue in 2018, and three customers contributed 14%, 12%, and 10%, respectively, in 2017.

Cost of Revenue

Cost of revenue increased $2.1 million, or 25%, from $8.6 million in 2017 to $10.7 million in 2018. The increase was primarily due to increases of $1.1 million in reagent and supply expenses related to increased billable tests delivered, $545,000 in personnel costs related to increased headcount, and $312,000 in depreciation costs due to increased medical laboratory equipment purchased to expand our capacity and throughput.

Cost per billable test delivered decreased slightly between periods, as the increase in our cost of revenue was offset by the increase in the number of billable tests we delivered.

Our gross profit increased $475,000, or 5%, from $10.2 million in 2017 to $10.7 million in 2018. The increase in gross profit was primarily due to an increase in revenue between periods that exceeded the increase in cost of revenue over the same period. Our gross profit as a percentage of revenue, or gross margin, decreased from 54.3% to 49.9% between periods. The decrease in gross margin was primarily due to the decrease in our average price per billable test, combined with the increase in personnel-related costs of revenue related to increased headcount.

Research and Development

Research and development expenses increased $1.3 million, or 31%, from $4.2 million in 2017 to $5.5 million in 2018. The increase was primarily due to increases of $952,000 in personnel costs related to increased headcount, and $275,000 in reagent and supply expenses and $125,000 in depreciation costs related to our increased efforts to maintain our technology advantage and expand our test menu.

Selling and Marketing

Selling and marketing expenses increased $447,000, or 11%, from $4.2 million in 2017 to $4.7 million in 2018. The increase was primarily due to increases of $639,000 in personnel costs and $142,000 in equity-based compensation expense, both related to increased headcount, partially offset by a decrease of $349,000 in marketing costs related to some marketing initiatives incurred in the prior period but did not incur in the current period.

General and Administrative

General and administrative expenses increased $305,000, or 6%, from $5.2 million in 2017 to $5.5 million in 2018. The increase was primarily due to increases of $199,000 in personnel costs related to increased headcount and $155,000 in bad debt expenses related to additional reserve for doubtful accounts.

Interest and Other Income, Net

Interest income was $578,000 and $457,000 for 2018 and 2017, respectively. This income mainly related to interest received on various investments in marketable securities.

Other income (expense) was not significant for 2018 or 2017. The primary component of other income (expense) for 2018 and 2017 was foreign currency valuation gains (losses).

Provision for (Benefit from) Income Taxes

We recorded income tax (benefit) of $36,000 and $(1.0 million) for 2018 and 2017, respectively. Our effective income tax rate was 0.7% and 34.2% of loss before income taxes for 2018 and 2017, respectively.

The effect of a full valuation allowance, state income taxes and certain expenses or adjustments related to equity-based compensation are the primary factors impacting our effective tax rate for 2018 and 2017.

The 2017 Tax Act, which was signed into law on December 22, 2017, has resulted in significant changes to the U.S. corporate income tax system. These changes include, among others, a federal statutory rate reduction from 35% to 21%, the elimination or reduction of certain domestic deductions and credits and limitations on the deductibility of interest expenses and executive compensation expenses. The 2017 Tax Act also transitions international taxation from a worldwide system to a modified territorial system and includes base erosion prevention measures on non-U.S. earnings. These changes were effective beginning in 2018. We account for changes in tax rates and tax laws in the period of enactment. As a result, for 2017, due to the reduction in the corporate income tax rate with the enactment of the 2017 Tax Act, we recorded a tax expense of $22,000 related to the revaluation of our net deferred tax assets. We have determined that the various other provisions of the 2017 Tax Act did not have a material impact on our results of operations or financial condition, largely because of the amount of our federal net operating loss carryover and we have no known unrepatriated foreign earnings.

In 2018, we increased the Company's deferred tax valuation allowance for the year ended December 31, 2018 from $118,000 to $1.4 million as we concluded it was more likely than not that some or all of the Company's deferred tax assets would not be utilized. As of December 31, 2018, our net state deferred tax asset was $0, and our net federal deferred tax asset was $0, as the result of a full valuation allowance. As of December 31, 2017, our net state deferred tax asset was $90,000, and our net federal deferred tax asset was $36,000. The temporary differences in existence for 2018 and 2017 are primarily from net operating loss, depreciation and equity-based compensation.

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

Equity Loss in Investee

Equity loss in investee was $935,000 and $524,000 in 2018 and 2017, respectively, and relates to our 30% ownership interest in FF Gene Biotech.

Liquidity and Capital Resources

Liquidity and Sources of Cash

We had $6.7 million and $6.5 million in cash and cash equivalents as of December 31, 2018 and 2017, respectively, and $30.7 million and $34.9 million in marketable securities, consisting of corporate bonds, as of December 31, 2018 and 2017, respectively.

Since commencing operations in May 2012, our operations have been financed primarily by our founder, Chief Executive Officer and Chairman of our board of directors, Ming Hsieh, and in more recent periods, by cash from our operations and equity financings.

Our primary uses of cash are to fund our operations 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. In addition, in the third and fourth quarters of 2016, we used an aggregate of $5.9 million in cash to make tax and other distributions to the members of Fulgent LLC, but we do not expect to make these or other types of distributions or dividends in the foreseeable future. Further, in April 2017, in connection with the establishment of FF Gene Biotech, we became obligated to contribute to FF Gene Biotech genetic sequencing and other equipment with a total cost of 60,000,000 RMB over a three-year period. To date, we have purchased and contributed to FF Gene Biotech equipment with an aggregate fair value of $3.0 million pursuant to these contribution obligations, of which $510,000 and $2.5 million were contributed in 2018 and 2017, respectively. Depending on the performance of FF Gene Biotech, this joint venture may never produce sufficient revenue to us to recover these capital and other investments and could cause our revenue to decrease if any of our direct customers in Asia choose to order genetic tests from FF Gene Biotech instead of from us, any of which could negatively affect our liquidity and cash flow. In addition, although we have in the past made cash distributions for tax and other purposes to the equity holders of our predecessor, we do not expect to use our cash make these or any other types of distributions or dividends in the foreseeable future.

We believe our existing cash, along with cash from our operations and proceeds from our equity financings, will be sufficient to meet our anticipated cash requirements for at least the next 12 months. Much of the losses we have incurred were attributable to a variety of non-cash charges, including equity-based compensation expenses. Additionally, if our business grows and we are able to achieve increased efficiencies and economies of scale in line with this growth, we expect that increased revenue levels would increase our ability to rely on cash from our operations to support our business in future periods, even if our expenses also increase as a result of the growth of our business. Based on these factors, we anticipate that cash from our operations will continue to play a meaningful role in our ability to meet our liquidity requirements and pursue our business plans and strategies in the next 12 months and in the longer term.

However, our expectations regarding the cash that may be provided by our operations and our cash needs in future periods could turn out to be wrong, in which case we may require additional financing to support our operations, as we do not presently have any commitments for future capital. For instance, 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, the amount and timing of sales of billable tests, the prices we charge for our tests due to changes in product mix, customer mix, general price degradation for genetic 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. Additional funding may not be available to us when needed, on acceptable terms or at all. If we raise 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 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,	
	2018	2017
	(in thousands)	
Cash (used in) provided by operating activities	$ (675)	$ 1,331
Net cash provided by (used in) investing activities	$ 950	$ (2,049)
Net cash provided by (used in) financing activities	$ 15	$ (770)

Operating Activities

Cash used in operating activities in 2018 was $675,000. The difference between net loss and cash used in operating activities for the period was primarily due to the effect of $2.3 million in equity-based compensation expenses and $2.2 million in the depreciation of assets. Cash used in operating activities decreased between periods primarily due to the negative effect of a $2.0 million increase in accounts receivable mainly due to the timing of collections from customers, partially offset by the positive effect of a $533,000 increase in accrued liabilities mainly related to payroll liabilities and contract liabilities.

Cash provided by operating activities in 2017 was $1.3 million. The difference between net loss and cash provided by operating activities for the period was primarily due to the effect of $2.1 million in equity-based compensation expenses and $1.7 million in the depreciation of assets. Cash provided by operating activities decreased between periods primarily due to the negative effect of a $1.5 million increase in other current assets resulting primarily from an increase in prepaid income taxes, insurance, licenses and subscriptions, and a $363,000 decrease in accounts payable resulting primarily from purchases of medical laboratory equipment and reagents, partially offset by the positive effect of a $1.1 million increase in accrued liabilities mainly related to payroll liabilities and deferred revenues and a $214,000 decrease in accounts receivable mainly due to the timing of collections from customers.

Investing Activities

Cash provided by investing activities in 2018 was $950,000, which primarily related to maturities of $28.0 million of marketable securities, partially offset by $24.2 million in purchases of marketable securities, $2.3 million in purchases of fixed assets consisting mainly of medical laboratory equipment, computer hardware and leasehold improvements, and purchased equipment with an aggregate fair value of $510,000 contributed to FF Gene Biotech.

Cash used in investing activities in 2017 was $2.0 million, which primarily related to $11.7 million in purchases of marketable securities, purchased equipment with an aggregate fair value of $2.5 million contributed to FF Gene Biotech, and $2.9 million in purchases of fixed assets consisting mainly of medical laboratory equipment, computer hardware and leasehold improvements, partially offset by maturities of $11.2 million of marketable securities and sales of $3.8 million of marketable securities.

Financing Activities

Cash provided by financing activities in 2018 was minimal. Cash used in financing activities in 2017 was $770,000, which represents payments of $801,000 for our initial public offering costs, partially offset by $31,000 in cash proceeds from exercises of stock options.

Critical Accounting Policies and Use of Estimates

This discussion and analysis is based on our consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States of America, 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. 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 genetic tests. We currently receive payments from: hospitals and medical institutions with which we have direct-bill relationships; research institutions; individual patients and third-party payors.

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 delivered electronically, and as such there are no shipping and handling fees incurred by us or billed to customers. Our sales are typically exempt from state sales taxation due to the nature of the results delivered. As a result, we do not charge customers state sales tax.

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.

The JOBS Act

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended, or JOBS Act. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable to public companies that are not emerging growth companies, including an extended transition period to comply with new or revised accounting standards applicable to public companies. We have chosen to "opt out" of this extended transition period and, as a result, we will comply with new or revised accounting standards as required when they are adopted. This decision to opt out of the extended transition period under the JOBS Act is irrevocable. We will remain an emerging growth company until December 31, 2021, unless our gross revenue exceeds $1.07 billion in any fiscal year before that date, we issue more than $1.0 billion of non-convertible debt in any three-year period before that date or the market value of our common stock held by non-affiliates exceeds $700.0 million as of the last business day of the second fiscal quarter of any fiscal year before that date.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, 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.

Not applicable.

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 and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. As required by Rule 13a-15(b) under the Exchange Act, our management, with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our disclosure controls and procedures as of December 31, 2018. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2018.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for our company, as this term is defined in Rule 13a-15(f) under the Exchange Act. As required by Rule 13a-15(c) under the Exchange Act, our management, with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2018, based on the criteria set forth in the Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2018.

This report does not include an attestation report of our independent registered public accounting firm regarding our internal control over financial reporting, in accordance with applicable SEC rules that permit us to provide only management's report in this report.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting during the quarter ended December 31, 2018, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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.

Item 9B. Other Information.

On February 28, 2018, we issued a press release (the "Earnings Release") announcing the Company's financial results for the quarter and full year ended December 31, 2018. A copy of the Press Release was furnished as Exhibit 99.1 to our Current Report on Form 8-K furnished to the SEC on February 28, 2018. After further review following the Earnings Release and in preparation of this Annual Report, we increased the Company's deferred tax valuation allowance for the year ended December 31, 2018. As a result, the Company's Consolidated Balance Sheet for the year ended December 31, 2018 included in the Earnings Release has been revised accordingly. These revisions include a reduction of the total assets, and total liabilities and equity from $55.0 million to $53.9 million. The Company's Consolidated Statements of Operations for the quarter and year ended December 31, 2018 have also been revised. For the quarter ended December 31, 2018, these revisions include an increase in net loss from $935,000 to $2.1 million and an increase in net loss per common share (basic and diluted) from $0.05 to $0.11. For the year ended December 31, 2018, these revisions include an increase in net loss from $4.5 million to $5.6 million and an increase in net loss per common share (basic and diluted) from $0.25 to $0.31. The Company's full financial results for the year ended December 31, 2018 are included in its Consolidated Balance Sheets and Consolidated Statements of Operations included in Item 15 of this Annual Report, and the financial results for the quarter ended December 31, 2018 are included in Note 16, Selected Quarterly Financial Data (Unaudited) of the Company's Consolidated Financial Statements included in Item 15 of this Annual Report. The increased tax valuation allowance had no impact on operating activities on the statement of cash flow and no impact on the Non-GAAP figures previously included in the Earnings Release. You should not rely on the figures in the Earnings Release that have been subsequently revised in this Annual Report.

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 2019 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, 2018.

Item 11. Executive Compensation.

The information required by this item is incorporated by reference to the definitive proxy statement for our 2019 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, 2018.

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 2019 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, 2018.

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 2019 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, 2018.

Item 14. Principal Accounting Fees and Services.

The information required by this item is incorporated by reference to the definitive proxy statement for our 2019 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, 2018.

PART IV

Item 15. Exhibits, 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.

We have elected not to provide summary information.

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 (incorporated by reference to Exhibit 2.1 to Amendment No. 1 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 19, 2016).	S-1/A	333-213469	2.1	9/19/2016	
3.1	Certificate of Incorporation of the registrant, dated May 13, 2016 (incorporated by reference to Exhibit 3.1 to the registrant's Quarterly Report on Form 10-Q filed with the SEC on August 14, 2017).	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 (incorporated by reference to Exhibit 3.1.1 to the registrant's Quarterly Report on Form 10-Q filed with the SEC on August 14, 2017).	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 (incorporated by reference to Exhibit 3.1.2 to the registrant's Quarterly Report on Form 10-Q filed with the SEC on August 14, 2017).	10-Q	001-37894	3.1.2	8/14/2017	
3.2	Bylaws of the registrant (incorporated by reference to Exhibit 3.2 to Amendment No. 2 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 26, 2016).	S-1/A	333-213469	3.2	9/26/2016	
4.1	Form of Certificate of Common Stock of the registrant (incorporated by reference to Exhibit 4.1 to Amendment No. 1 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 19, 2016).	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. (incorporated by reference to Exhibit 4.2 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	S-1	333-213469	4.2	9/2/2016	
10.1#	Form of Indemnification Agreement between the registrant and each of its officers and directors (incorporated by reference to Exhibit 10.1 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	S-1	333-213469	10.1	9/2/2016	
10.2#	Amended and Restated 2015 Equity Incentive Plan of Fulgent Therapeutics LLC (incorporated by reference to Exhibit 10.2 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (incorporated by reference to Exhibit 10.3 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (incorporated by reference to Exhibit 10.4 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	S-1	333-213469	10.4	9/2/2016	

Exhibit Number	Description	Form	File Number	Incorporated by Reference Exhibit	Filing Date	Filed Herewith
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 (incorporated by reference to Exhibit 10.5 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	S-1	333-213469	10.5	9/2/2016	
10.6#	2016 Omnibus Incentive Plan of the registrant (incorporated by reference to Exhibit 10.6 to Amendment No. 2 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 26, 2016).	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 (incorporated by reference to Exhibit 10.7 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (incorporated by reference to Exhibit 10.8 to the registrant's Annual Report on Form 10-K filed with the SEC on March 16, 2017).	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 (incorporated by reference to Exhibit 10.9 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	S-1	333-213469	10.9	9/2/2016	
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 Form of Notice of Restricted Stock Unit Substitution Award and Restricted Stock Unit Agreement under the 2016 Omnibus Incentive Plan of the registrant (incorporated by reference to Exhibit 10.10 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (incorporated by reference to Exhibit 10.11 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (incorporated by reference to Exhibit 10.12 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (incorporated by reference to Exhibit 10.13 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (incorporated by reference to Exhibit 10.14 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	S-1	333-213469	10.14	9/2/2016	

Exhibit Number	Description	Form	File Number	Incorporated by Reference Exhibit	Filing Date	Filed Herewith
10.15#	Severance Agreement, dated July 7, 2016, by and among Fulgent Therapeutics LLC, the registrant and Paul Kim (incorporated by reference to Exhibit 10.15 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (incorporated by reference to Exhibit 10.16 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (incorporated by reference to Exhibit 10.17 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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 (included as an exhibit to Exhibit 2.1, incorporated by reference to Exhibit 2.1 to Amendment No. 1 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 19, 2016).	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 (incorporated by reference to Exhibit 10.19 to the registrant's Registration Statement on Form S-1 (File No. 333-213912) filed with the SEC on September 2, 2016).	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) (incorporated by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q filed with the SEC on August 14, 2017).	10-Q	001-37894	10.1	8/14/2017	
10.22§	Technical Know-How License Agreement, dated April 25, 2017, by and between the registrant and Fujian Fulgent Gene Biotech Co., Ltd. (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q filed with the SEC on August 14, 2017).	10-Q	001-37894	10.2	8/14/2017	
10.23	Commercial Lease, dated January 31, 2018, by and between E & E Plaza LLC and Fulgent Therapeutics LLC.					X
10.24	Commercial Lease, dated April 1, 2018, by and between 4401 Santa Anita Corporation and Fulgent Genetics, Inc.					X
21.1	Subsidiaries of the registrant.					X
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm, relating to the financial statements of the registrant.					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

Exhibit Number	Description	Form	File Number	Incorporated by Reference Exhibit	Filing Date	Filed Herewith
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	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase 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.

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: March 22, 2019

By: /s/ Ming Hsieh
Ming Hsieh
President, 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 Ming Hsieh	President, Chief Executive Officer and Chairman of the Board (principal executive officer)	March 22, 2019
/s/ Paul Kim Paul Kim	Chief Financial Officer (principal financial and accounting officer)	March 22, 2019
/s/John Bolger John Bolger	Director	March 22, 2019
/s/ James J. Mulay (Mulé) James J. Mulay (Mulé)	Director	March 22, 2019
/s/ Yun Yen Yun Yen	Director	March 22, 2019

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, 2018 and 2017, the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows, for each of the two years in the period ended December 31, 2018, 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, 2018 and 2017, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of accounting for revenue from contracts with customers in 2018 due to the adoption of the new revenue standard.

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 Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits 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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

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.

/s/ DELOITTE & TOUCHE LLP
Los Angeles, California

March 22, 2019

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

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

	December 31, 2018	December 31, 2017
Assets		
Current assets		
Cash and cash equivalents	$ 6,736	$ 6,490
Marketable securities	24,298	19,994
Trade accounts receivable, net of allowance for doubtful accounts of $590 and $287, as of December 31, 2018 and 2017, respectively	5,948	4,005
Other current assets	2,561	2,438
Total current assets	39,543	32,927
Marketable securities, long term	6,386	14,883
Equity method investments	1,512	1,937
Fixed assets, net	6,446	7,272
Deferred tax asset	—	126
Other long-term assets	17	39
Total assets	$ 53,904	$ 57,184
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 1,313	$ 2,089
Accrued liabilities	1,425	911
Total current liabilities	2,738	3,000
Other long-term liabilities	14	6
Total liabilities	2,752	3,006
Commitments and contingencies (Note 8)		
Stockholders' equity		
Common stock, $0.0001 par value per share, 50,000 and 50,000 shares authorized, 18,172 and 17,847 shares issued and outstanding at December 31, 2018 and 2017, respectively.	2	2
Preferred stock, $0.0001 par value per share, 1,000 shares authorized, no shares issued or outstanding at December 31, 2018 and 2017	—	—
Additional paid-in capital	114,203	111,884
Accumulated other comprehensive income loss	(35)	(44)
Accumulated deficit	(63,018)	(57,664)
Total stockholders' equity	51,152	54,178
Total liabilities and stockholders' equity	$ 53,904	$ 57,184

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

FULGENT GENETICS, INC.
Consolidated Statements of Operations
(in thousands, except per share data)

	Year Ended December 31,	
	2018	2017
Revenue	$ 21,351	$ 18,730
Cost of revenue	10,697	8,551
Gross profit	10,654	10,179
Operating expenses:		
Research and development	5,534	4,223
Selling and marketing	4,652	4,205
General and administrative	5,538	5,233
Total operating expenses	15,724	13,661
Operating loss	(5,070)	(3,482)
Interest and other income, net	434	481
Loss before income taxes and equity loss in investee	(4,636)	(3,001)
Provision for (benefit from) income taxes	36	(1,015)
Loss before equity loss in investee	(4,672)	(1,986)
Equity loss in investee	(935)	(524)
Net loss	$ (5,607)	$ (2,510)
Net loss per common share:		
Basic and Diluted	$ (0.31)	$ (0.14)
Weighted-average common shares:		
Basic and Diluted	17,978	17,739

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

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

	Year Ended December 31,	
	2018	2017
Net loss	$ (5,607)	$ (2,510)
Other comprehensive income (loss)		
Foreign currency translation gain (loss)	(44)	81
Net unrealized gain (loss) on marketable securities, net of tax	53	(22)
Comprehensive loss	$ (5,598)	$ (2,451)

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

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

	Stockholders' Equity					
	Shares	Amount	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Equity
Balance at December 31, 2016	**17,676**	**$ 2**	**$ 109,734**	**$ (103)**	**$ (55,154)**	**$ 54,479**
Equity-based compensation	—	—	2,119	—	—	2,119
Exercise of common stock options	81	—	31	—	—	31
Restricted stock awards	90	—	—	—	—	—
Other comprehensive income, net	—	—	—	59	—	59
Net loss	—	—	—	—	(2,510)	(2,510)
Balance at December 31, 2017	**17,847**	**$ 2**	**$ 111,884**	**$ (44)**	**$ (57,664)**	**$ 54,178**
Equity-based compensation	—	—	2,304	—	—	2,304
Exercise of common stock options	40	—	15	—	—	15
Restricted stock awards	285	—	—	—	—	—
Cumulative effect of accounting change	—	—	—	—	327	327
Cumulative tax effect of accounting change	—	—	—	—	(74)	(74)
Other comprehensive income, net	—	—	—	9	—	9
Net loss	—	—	—	—	(5,607)	(5,607)
Balance at December 31, 2018	**18,172**	**$ 2**	**$ 114,203**	**$ (35)**	**$ (63,018)**	**$ 51,152**

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,	
	2018	**2017**
Cash flow from operating activities:		
Net loss	$ (5,607)	$ (2,510)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Equity-based compensation	2,304	2,119
Depreciation	2,163	1,728
Loss (gain) on disposal of fixed asset	88	5
Amortization of premium of marketable securities	297	370
Provision for bad debt	309	160
Deferred income taxes	36	(336)
Equity loss in investee	935	524
Other	44	(15)
Changes in operating assets and liabilities:		
Accounts receivable	(1,970)	214
Other current assets	91	(1,537)
Accounts payable	102	(363)
Taxes payable	—	(124)
Accrued liabilities	533	1,098
Other current liabilities	—	(2)
Cash (used in) provided by operating activities	(675)	1,331
Cash flow from investing activities:		
Purchases of fixed assets	(2,322)	(2,895)
Sale of marketable securities	—	3,781
Purchase of marketable securities	(24,187)	(11,659)
Maturities of marketable securities	27,969	11,185
Purchase of equipment contributed to Equity Method Investee	(510)	(2,461)
Net cash provided by (used in) investing activities	950	(2,049)
Cash flow from financing activities:		
Payment of initial public offering costs	—	(801)
Proceeds from exercise of stock options	15	31
Net cash provided by (used in) financing activities	15	(770)
Effect of exchange rate changes on cash and cash equivalents	(44)	81
Net increase (decrease) in cash	246	(1,407)
Cash balance at beginning of period	6,490	7,897
Cash balance at end of period	$ 6,736	$ 6,490
Supplemental disclosures of cash flow information:		
Income taxes paid	$ 1	$ 757
Supplemental disclosures of non-cash investing and financing activities:		
Fixed assets included in accounts payable	$ 85	$ 1,014

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 ("U.S. GAAP"). These financial statements include the assets, liabilities, revenues and expenses of all wholly-owned 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 (1) the power to direct the economically significant activities of the entity and (2) 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 significant intercompany accounts and transactions are eliminated from the accompanying consolidated financial statements.

Nature of the Business

Fulgent Genetics, Inc., together with its subsidiaries (collectively referred to as the "Company," unless otherwise noted or the context otherwise requires), is a growing technology company with an initial focus on offering comprehensive genetic testing to provide physicians with clinically actionable diagnostic information they can use to improve the quality of patient care (the "Diagnostics business"). The Company has developed a proprietary technology platform that allows it to offer a broad and flexible test menu and continually expand and improve its proprietary genetic reference library. The Company's test menu currently includes single-gene tests and pre-established, multi-gene, disease-specific panels that collectively test for many genetic conditions, including various cancers, cardiovascular diseases, neurological disorders and pediatric conditions. The Company's existing customer base consists primarily of hospitals and medical institutions, which are typically frequent and high-volume users of genetic tests and which often pay the Company directly for its tests.

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, assumptions and decisions that affect the reported amounts and related disclosures, including the selection of appropriate accounting policies and the assumptions on which to base accounting estimates. In making these estimates and assumptions and reaching these decisions, the Company applies judgment based on its understanding and analysis of the relevant circumstances, including 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. Actual results could differ 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 doubtful accounts, (iii) the useful lives of fixed assets, (iv) estimates of tax liabilities and (v) the valuation of equity-based awards.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. 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.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are stated at the amount the Company expects to collect. The Company performs credit evaluations of its customers and generally does not require collateral. The Company establishes an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends and other information that assists in management's evaluation. The Company writes off accounts receivable following a review by management and a determination that the receivable is uncollectible.

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

	December 31,	
	2018	2017
	(in thousands)	
Allowance for doubtful accounts at beginning of year	$ 287	$ 151
Bad debt expense	309	160
Deductions	(6)	(24)
Allowance for doubtful accounts at end of year	$ 590	$ 287

Marketable Securities

All marketable securities, which consist of debt securities, United States Treasury and U.S. government agency securities, have been classified as "available for sale" and are carried at fair value. Unrealized gains and losses, net of any related tax effects, are excluded from earnings and are included in other comprehensive loss and reported as a separate component of stockholders' equity until realized. Realized gains and losses and declines in value judged to be other than temporary, if any, on marketable securities are included in other income (expense), net. The cost of any marketable securities sold is based on the specific-identification method. The amortized cost of marketable securities is adjusted for amortization of premiums and accretion of discounts to maturity. Interest on marketable securities is included in interest income. 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 regularly evaluates whether declines in the fair value of its investments below their cost are other than temporary. The evaluation includes consideration of the cause of the impairment, including the creditworthiness of the security issuers, the number of securities in an unrealized loss position, the severity and duration of the unrealized losses, whether the Company has the intent to sell the securities, and whether it is more likely than not that the Company will be required to sell the securities before the recovery of their amortized cost basis. If the Company determines that the decline in fair value of an investment is below its accounting basis and this decline is other than temporary, the Company would reduce the carrying value of the security it holds and record a loss for the amount of such decline. The Company has not recorded any realized losses or declines in value judged to be other than temporary on its investments.

Fair Value of Financial Instruments

The Company's financial instruments consist principally of cash and cash equivalents, marketable securities, accounts receivable and accounts payable. The carrying amounts of certain of these financial instruments, including cash and cash equivalents, accounts receivable and accounts payable, approximate fair value due to their short maturities. Fair value of marketable securities 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, accounts receivable and marketable securities, which consist of debt securities, and cash equivalents. As of December 31, 2018, 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 that are under common control or are affiliates, one customer comprised 13% of total revenue in the year ended December 31, 2018, and three customers comprised 14%, 12% and 10% of total revenue in the year ended December 31, 2017. One customer comprised 18% and 13% of total accounts receivable as of December 31, 2018 and 2017, respectively.

Revenue from the U.S. government was less than 10% of total revenue in each of the years ended December 31, 2018 and 2017.

The Company relies on a limited number of suppliers for 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 encounters delays or difficulties securing these 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 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 proportionate share of the net income or loss of these companies is 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 its equity method investments for impairment whenever events or changes in circumstances indicate that a decline in value has occurred that is other than temporary. Evidence considered in this evaluation includes, 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 is determined to have a decline in value deemed to be other than temporary it is written down to estimated fair value.

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, which is generally between three and five years. 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.

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 three 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.

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. To date, there have been no such impairment losses.

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 genetic tests. The Company currently receives payments from: hospitals and medical institutions with which it has direct-bill relationships; research institutions; individual patients and third-party payors.

The Company's test results are delivered electronically, and as such there are no shipping and handling fees incurred by it or billed to customers. The Company's sales are typically exempt from state sales taxation due to the nature of the results delivered. As a result, the Company currently does not charge customers state sales tax and continues to assess.

Effective January 1, 2018, the Company began recognizing revenue in accordance with FASB ASC Topic 606, Revenue from Contracts with Customers ("ASC 606"). The Company adopted ASC 606 utilizing the modified retrospective method, meaning the cumulative effect of applying the standard was recognized to opening retained earnings as of January 1, 2018. To reflect the impact of the adoption, the Company recorded an adjustment of $327,000 to beginning accumulated deficit and accounts receivable and an adjustment of ($74,000) to beginning accumulated deficit and deferred taxes. Under ASC 606, 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 customers. To determine revenue recognition for contracts with customers that are within the scope of ASC 606, 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.

Performance Obligations

Genetic Testing Services

Clinical – Institutional and Patient Direct Pay

Our clinical institutional contracts included within genetic testing services typically have a single performance obligation to deliver genetic testing services to the ordering facility or patient. Some arrangements involve the delivery of genetic testing services to research institutions, which we refer to as "sequencing as a service." In arrangements with hospitals, patients who pay directly, medical or research institutions, the transaction price is stated within the contract and is therefore fixed consideration. For most of our clinical volume, we identified the hospital, patients, medical or research institutions as the customer in Step 1 of the model 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 of the model. Control over genetic testing services is transferred to our ordering facility at a point in time. Specifically, we determined the customer obtains control of the promised service upon our delivery of test results.

Clinical – Insurance

Our clinical insurance contracts included within genetic testing services typically have a single performance obligation to deliver genetic testing services to the ordering facility or patient. For most of our clinical insurance volume, we identified the patient as the customer in Step 1 of the model and have determined a contract exists with the patient in Step 1. In arrangements with insurance patients, the transaction price is stated within the contract, however, we 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, we utilize the expected value method under a portfolio approach. Our estimate requires significant judgment and is developed using historical reimbursement data from payors and patients, as well as known current reimbursement trends not reflected in the historical data. As these contracts typically have a single performance obligation, no allocation of the transaction price is required in Step 4 of the model. Control over genetic testing services is transferred to our ordering physicians at a point in time. Specifically, we determined the customer obtains control of the promised service upon our delivery of the test results.

Certain incremental costs pertaining to both clinical insurance and institutional, such as commissions, are incurred in obtaining clinical contracts. Historically contract costs have not been significant to the financial statements. We have elected to utilize the practical expedient to expense incremental costs of obtaining a contract that meet the capitalization criteria, as the amortization period of any contract acquisition asset would be one year or less due to the short-term nature of the customer life.

Significant Judgments and Contract Estimates

Genetic Testing Services

Accounting for clinical 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 payors, estimation of the transaction price represents variable consideration. In order to estimate variable consideration, we utilize a portfolio approach in which payors with similar reimbursement experience are grouped into portfolios. Our estimates of variable consideration are based primarily on historical reimbursement data. Certain assumptions will also be adjusted based on known and anticipated factors not reflected in the historical reimbursement data. We monitor these accrual estimates at each reporting period based on actual cash collections in order to assess whether a revision to the estimate is required. Both the initial accrual estimate and any subsequent revision to the estimate contain uncertainty and require the use of judgment in the estimation of the transaction price and application of the constraint for variable consideration. If actual results in the future vary from the Company's estimates, the Company will adjust these estimates, which would affect revenue and earnings in the period such variances become known.

Contract Liabilities

Payments received in advance of services rendered are recorded as contract liabilities and are subsequently recognized as revenue in the period in which the applicable revenue recognition criteria, as described above, are met. Contract liabilities consists primarily of revenue from tests performed for customers that have a limited time period following an initial order to request certain follow-up tests at no additional charge.

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 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.

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.

The Company's predecessor, Fulgent LLC, was organized as a limited liability company and its members elected to have Fulgent LLC treated as a partnership for income tax purposes. As a result, for all periods prior to the Reorganization, all taxable income or loss and tax credits of the Company generally were reflected in the personal income tax returns of Fulgent LLC's members, and no provision for federal and state income taxes was provided in the accompanying consolidated financial statements. The Company became a taxable entity upon completion of the Reorganization on September 30, 2016.

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 statements of operations based upon each award recipient's role with the Company. The Company primarily grants to its employees restricted stock unit (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 included in other comprehensive loss in the accompanying consolidated statements of stockholders' equity. The Company's 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 remeasurements were not significant in the year ended December 31, 2018.

Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive loss. Other comprehensive loss consists of unrealized loss on marketable securities and foreign currency translation adjustments from its subsidiaries not using the U.S. dollar as their functional currency. The Company did not have reclassifications from other comprehensive loss to the loss during the year ended December 31, 2018.

Basic and Diluted Net Loss per Share

Basic net loss per common share is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted net loss per common share is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common shares and dilutive common share equivalents outstanding during the period. Because the Company has reported a net loss attributable to common stockholders for all periods presented, diluted net loss per common share is the same as basic net loss per common share for these periods.

Emerging Growth Company

Pursuant to the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), a company constituting an "emerging growth company" is, among other things, entitled to rely upon certain reduced reporting requirements. The Company is an emerging growth company, but has irrevocably elected not to take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. As a result, the Company will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for public companies that are not emerging growth companies.

Accounting Pronouncements Recently Adopted

ASU 2014-09

The Company adopted ASU 2014-09 Revenue from Contracts with Customers, and all related amendments (collectively codified as ASC 606) on January 1, 2018 utilizing the modified retrospective method, meaning the cumulative effect of applying the standard to all contracts completed as of the date of initial application was recognized to opening retained earnings as of January 1, 2018. Comparative information from prior periods has not been restated and continues to be reported under the accounting standards in effect for those periods.

Financial Statement Impact of Adoption ASC 606

The cumulative effect of changes made to the Condensed Consolidated Balance Sheet at January 1, 2018 for the adoption of ASC 606 were as follows:

	Balance at December 31, 2017	Adjustments Due to ASC 606	Balance at January 1, 2018
		(in thousands)	
Condensed Consolidated Balance Sheet data			
Assets:			
Accounts receivable	$ 4,005	$ 327	$ 4,332
Deferred tax asset / (liability)	126	(74)	52
Equity:			
Accumulated deficit	$ (57,664)	$ 253	$ (57,411)

In accordance with ASC 606 requirements under the modified retrospective method of adoption, the disclosure of the impacts to condensed consolidated financial statements for the years ended December 31, 2018 were as follows:

	As reported	Adjustments Due to ASC 606	Balances without the adoption of Topic 606
		(in thousands)	
Condensed Consolidated Balance Sheet data			
Assets:			
Accounts receivable	$ 5,948	$ (20)	$ 5,928
Deferred tax asset	—	—	—
Equity:			
Accumulated deficit	$ (63,018)	$ (20)	$ (63,038)

	For the Year Ended December 31, 2018		
	As reported	Adjustments Due to ASC 606	Balances without the adoption of Topic 606
		(in thousands, except per share data)	
Condensed Consolidated Statement of Operations data:			
Total revenue	$ 21,351	$ 307	*$ 21,658
Provision for (benefit from) income taxes	36	74	110
Net income (loss)	(5,607)	233	(5,374)
Net income (loss) per common share:			
Basic & Diluted	$ (0.31)	$ 0.01	$ (0.30)

* Revenue under ASC 605 would have been greater than under ASC 606 because the amount of cash receipts in 2018 from current and prior period insurance billings was greater than the estimated collections for services delivered and billed in 2018.

There was no impact on the condensed consolidated statements of cash flows for the year ended December 31, 2018.

Disaggregation of Revenue

The Company classifies its customers into three payor types, Clinical Institutional, Patients who pay directly or Clinical Insurance, as we believe this best depicts how the nature, amount, timing, and uncertainty of our revenue and cash flows are affected by economic factors. The following table summarizes revenue from contracts with customers by payor type for the year ended December 31, 2018.

	Year ended December 31, 2018 (in thousands)
Genetic Testing Services by payor	
Institutional	$ 19,980
Patient	547
Insurance	824
Total Revenue	$ 21,351

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

Transaction Price Allocated to Future Performance Obligations

ASC 606 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, 2018. 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 Genetic Testing Services that extend beyond one year.

ASU No. 2016-01

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities, which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments, including a provision that requires equity investments (except for investments accounted for under the equity method of accounting) to be measured at fair value, with changes in fair value recognized in current earnings. The ASU was effective for the Company in the first quarter of 2018, with early adoption permitted. The adoption of this update did not have a material impact on our Consolidated Financial Statements.

ASU No. 2016-15

In August 2016, the FASB issued ASU No. 2016-15, Statement of Cash Flows (Topic 230). The standard clarifies the way certain cash receipts and cash payments are classified with the objective of reducing the existing diversity in practice. The standard was effective for fiscal years and interim periods beginning after December 15, 2017. The adoption of this update did not have a material impact on our Consolidated Financial Statements.

Recent Accounting Pronouncements

We evaluate all Accounting Standards Updates (ASUs) issued by the Financial Accounting Standards Board (FASB) for consideration of their applicability. ASUs not included in our disclosures were assessed and determined to be either not applicable or are not expected to have a material impact on our Consolidated Financial Statements.

ASU No. 2016-02

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which supersedes ASC 840, Leases. The FASB has issued subsequent amendments to improve and clarify the implementation guidance of Topic 842. The new standard requires an entity to recognize leases on the balance sheet and to disclose key information about the entity's leasing arrangements. The Company adopted this standard at the beginning of fiscal year 2019 using the modified retrospective transition approach, including certain practical expedients, for all leases existing at January 1, 2019, the effective and initial application date. The estimated impact of the

adoption to the Company's consolidated financial statements included the recognition of operating lease liabilities of approximately $3.1 million with corresponding right-of-use assets of approximately the same amount based on the present value of the remaining lease payments for existing operating leases. This standard is not expected to have a material impact on the Company's results of operations. The Company has revised its relevant policies and procedures, as applicable, to meet the new accounting, reporting and disclosure requirements of Topic 842 and has updated internal controls accordingly.

ASU No. 2016-13

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments-Credit Losses: Measurement of Credit Losses on Financial Instruments. ASU No. 2016-13 replaces the incurred loss impairment methodology in current U.S. GAAP with a methodology that reflects expected credit losses. The update is intended to provide financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments to extend credit held by a reporting entity at each reporting date. Entities will apply the standard's provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. The standard will be effective for annual reporting periods beginning after December 15, 2019, including interim periods within those reporting periods. Early adoption is permitted. The Company has not yet evaluated the effect this ASU will have on its consolidated financial statements and related disclosures.

ASU No. 2017-08

In March 2017, the FASB issued ASU No. 2017-08, Receivables–Nonrefundable Fees and Other Costs (Subtopic 310-20). Under the ASU, entities must amortize to the earliest call date the premium on certain purchased callable debt securities. The ASU does not require any accounting change for debt securities held at a discount. The guidance calls for a modified retrospective transition approach under which a cumulative-effect adjustment will be made to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. The ASU is effective for public business entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. Early adoption is permitted for all entities, including in an interim period. The Company does not expect the adoption of the new guidance under the standard to materially affect its financial position or results of operations.

ASU No. 2018-02

In February 2018, the FASB issued ASU No. 2018-02, Income Statement–Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income, which allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act enacted by the U.S. federal government on December 22, 2017 (the "2017 Tax Act"). Consequently, the amendments eliminate the stranded tax effects resulting from the 2017 Tax Act and will improve the usefulness of information reported to financial statement users. The amendments in this ASU are effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period, (1) for public business entities for reporting periods for which financial statements have not yet been issued and (2) for all other entities for reporting periods for which financial statements have not yet been made available for issuance. The Company does not expect the adoption of the new guidance under the standard to materially affect its financial position or results of operations.

ASU No. 2018-15

In August 2018, the FASB issued ASU No. 2018-15, Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract, which provides new guidance on the accounting for implementation, set-up, and other upfront costs incurred in a hosted cloud computing arrangement. Under the new guidance, entities will apply the same criteria for capitalizing implementation costs as they would for an internal-use software license arrangement. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted. This ASU can be adopted prospectively to eligible costs incurred on or after the date of adoption or retrospectively. The Company does not expect the adoption of the new guidance under the standard to materially affect its financial position or results of operations.

Note 3. Marketable Securities

The Company's marketable securities consisted of the following:

	December 31, 2018			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Aggregate Fair Value
	(in thousands)			
Marketable securities:				
Short-term				
Money market accounts	$ 2,692	$ —	$ —	$ 2,692
United States Treasury	990	—	—	990
U.S. government agency securities	790	—	—	790
Corporate debt securities	22,613	1	(96)	22,518
Less: Cash equivalents	(2,692)	—	—	(2,692)
Total short-term marketable securities	24,393	1	(96)	24,298
Corporate debt securities	6,383	11	(8)	6,386
Total long-term marketable securities	6,383	11	(8)	6,386
	$ 30,776	$ 12	$ (104)	$ 30,684

	December 31, 2017			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Aggregate Fair Value
	(in thousands)			
Marketable securities:				
Short-term				
Money market accounts	$ 723	$ —	$ —	$ 723
Corporate debt securities	20,040	2	(48)	19,994
Less: Cash equivalents	(723)	—	—	(723)
Total short-term marketable securities	20,040	2	(48)	19,994
Corporate debt securities	14,999	—	(116)	14,883
Total long-term marketable securities	14,999	—	(116)	14,883
	$ 35,039	$ 2	$ (164)	$ 34,877

Management determined that the gross unrealized losses of $104,000 on the Company's marketable securities as of December 31, 2018 were temporary in nature. Gross unrealized losses on the Company's marketable securities were $164,000 as of December 31, 2017. The Company currently does not intend to sell these securities prior to maturity and does not consider these investments to be other-than-temporarily impaired as of December 31, 2018.

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 inputs 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, 2018			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Marketable securities:				
Corporate debt securities	$ 28,904	$ —	$ 28,904	$ —
United States Treasury	990	—	990	—
U.S. government agency securities	790	—	790	—
Money market accounts	2,692	2,692	—	—
Total marketable securities	$ 33,376	$ 2,692	$ 30,684	$ —

	December 31, 2017			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Marketable securities:				
Corporate debt securities	$ 34,877	$ —	$ 34,877	$ —
Money market accounts	723	723	—	—
Total marketable securities	$ 35,600	$ 723	$ 34,877	$ —

The Company's Level 1 assets include money market instruments and are valued based upon observable market prices. Level 2 assets consist of United States Treasury, U.S. government agency securities, and corporate 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, 2018 and 2017, the Company had no investments that were measured using unobservable (Level 3) inputs.

There were no transfers between fair value measurement levels during the years ended December 31, 2018 and 2017.

Gross unrealized gains or losses for cash equivalents and marketable securities as of December 31, 2018 were not material. As of December 31, 2018, unrealized losses for securities in an unrealized loss position for more than 12 months were $84,000. During the years ended December 31, 2018 and 2017, the Company did not recognize other-than-temporary impairment losses related to its marketable securities.

Note 5. Fixed Assets

Major classes of fixed assets consisted of the following:

	Useful Lives	December 31, 2018	December 31, 2017
		(in thousands)	
Computer hardware	3 Years	$ 1,579	$ 1,435
Computer software	3 Years	495	463
Medical lab equipment	5 Years	8,136	7,145
Furniture and fixtures	5 Years	233	159
Leasehold improvements	Shorter of lease term or estimated useful life	802	763
Assets not yet placed in service		1,087	1,074
Total		12,332	11,039
Less: Accumulated depreciation		(5,886)	(3,767)
Property and equipment, net		$ 6,446	$ 7,272

Depreciation expense on fixed assets totaled $2.2 million and $1.7 million for the years ended December 31, 2018 and 2017, respectively.

Note 6. Other Current Assets

Other current assets consisted of the following:

	December 31,	
	2018	2017
	(in thousands)	
Reagents	$ 314	$ 231
Prepaid expenses	706	624
Prepaid income taxes	1,251	1,313
Marketable securities interest receivable	220	204
Other receivable	70	66
Total	$ 2,561	$ 2,438

Reagents are used for DNA sequencing applications in the Company's DNA sequencing equipment.

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 during the years ended December 31, 2018 and 2017. Revenue by region was as follows:

	December 31,	
	2018	2017
	(in thousands)	
Revenue:		
United States	$ 12,579	$ 9,024
Foreign:		
Canada	3,984	4,091
People's Republic of China ("PRC")	109	2,614
Other Countries	4,679	3,001
Total	$ 21,351	$ 18,730

Note 8. Commitments and Contingencies

Operating Leases

The Company has commitments under various non-cancelable operating leases with varying terms through August 2023. The Company has options to renew some of these leases for three years after their expiration. Future minimum payments under non-cancelable operating leases as of December 31, 2018 are as follows:

	Amounts
Year ending December 31,	(in thousands)
2019	$ 560
2020	559
2021	550
2022	558
Thereafter	1,429
Total minimum lease payments	$ 3,656

The Company's headquarters is located in Temple City, California, which is comprised of various corporate offices and a laboratory certified under the Clinical Laboratory Improvement Amendments of 1988 ("CLIA"), accredited by the College of American Pathologists ("CAP") and licensed by the State of California Department of Public Health ("CA DPH"). Additional offices are located in El Monte, California and Atlanta, Georgia and are used for certain research and development, customer service, report generation and other administrative activities.

Rent expense for the years ended December 31, 2018 and 2017 was approximately $418,000 and $250,000, respectively.

In January 2018, we entered into a lease renewal of our headquarters in Temple City, California, which commenced on February 1, 2018 and expires January 31, 2021. The total annual rent under the lease is approximately $269,000.

In June 2018, we entered into a lease of office space in El Monte, California, which commenced on August 13, 2018 and expires on August 31, 2023. The total annual rent under the lease is approximately $279,000.

FF Gene Biotech

See Note 15 for a description of the Company's commitments related to its joint venture, FF Gene Biotech (as defined in Note 15).

Purchase Obligations

As of December 31, 2018, the Company had non-cancelable purchase obligations of $5.7 million for reagents, equipment and maintenance agreements.

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.

Note 9. Stockholders' Equity

Components of Comprehensive Income (Loss)

Comprehensive income (loss) consists of two components: net income (loss), and other comprehensive income (loss) ("OCI"). OCI refers to revenue, expenses, gains and losses that, in conformity with U.S. GAAP, are recorded as in the Company's consolidated statements of stockholders' equity but are excluded from the Company's consolidated statements of operations, and as a result, its net income (loss). The Company's OCI consists of foreign currency translation adjustments from its subsidiaries not using the U.S. dollar as their functional currency and unrealized gains and losses on marketable securities classified as available-for-sale, net of taxes.

The tax effects related to unrealized holding gains (losses) on marketable securities were $21,000 and $37,000 as of December 31, 2018 and 2017, respectively.

Certificate of Incorporation

In accordance with the Company's amended certificate of incorporation, the Company is authorized to issue 50,000,000 shares of common stock, with a par value of $0.0001 per share, and 1,000,000 shares of preferred stock, with a par value of $0.0001 per share. In May 2017, the Company amended its certificate of incorporation to reduce its authorized shares from 200,000,000 to 50,000,000. As of December 31, 2018, there were no outstanding shares of preferred stock.

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 operations as follows:

	Year Ended December 31,	
	2018	2017
	(in thousands)	
Cost of revenue	$ 523	$ 479
Research and development	732	807
Selling and marketing	460	318
General and administrative	589	515
Total	$ 2,304	$ 2,119

Award Activity

The below discussions of equity-based award activity, including all nomenclature, share numbers and weighted-average exercise prices, have been adjusted to give retroactive effect to the Reorganization as if it occurred at the beginning of each period presented.

Option Awards

The following table summarizes activity for options to acquire shares of the Company's common stock in the years ended December 31, 2018 and 2017:

	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, 2016	556	$ 0.85		9.0	$ 5,976
Granted	—				
Exercised	(81)	$ 0.38	$ 4.19		$ 578
Canceled	(10)	$ 4.91	$ 6.32		
Balance at December 31, 2017	465	$ 0.84		8.0	$ 1,785
Granted	10	$ 3.93	$ 2.92		
Exercised	(40)	$ 0.38	$ 5.80		
Canceled	(18)	$ 8.19	$ 8.47		
Balance at December 31, 2018	417	$ 0.64		7.1	$ 1,116
Exercisable as of December 31, 2018	285	$ 0.53		7.0	$ 786

(1) Aggregate intrinsic value is calculated as the difference between (i) the exercise price of options that, as of the applicable date, have an exercise price in excess of the fair value of the Company's common stock, and (ii) the fair value of the Company's common stock as of the applicable date.

The Company granted no option awards in the year ended December 31, 2017. The total fair value of options that vested during the years ended December 31, 2018 and 2017 was $645,000 and $1.1 million, respectively. As of December 31, 2018, the remaining unrecognized compensation expense related to all outstanding option awards was $146,000 and is expected to be recognized over a weighted-average period of 0.7 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.

No RSU awards were granted prior to the year ended December 31, 2016. The following table summarizes activity for RSUs relating to shares of the Company's common stock in the years ended December 31, 2018 and 2017:

	Number of Shares (in thousands)	Weighted-Average Grant Date Fair Value
Balance at December 31, 2016	362	$ 9.69
Granted	708	$ 5.09
Vested and settled	(90)	$ 9.66
Forfeited	(43)	$ 9.33
Balance at December 31, 2017	937	$ 7.39
Granted	554	$ 4.39
Vested and settled	(285)	$ 7.78
Forfeited	(120)	$ 5.77
Balance at December 31, 2018	1,086	$ 5.94

The RSU awards granted in the years ended December 31, 2018 and 2017 will result in aggregate equity-based compensation expense of $2.4 million and $4.8 million, respectively, in each case to be recognized over four years from the grant date of each award granted in the period. As of December 31, 2018, the remaining unrecognized compensation expense related to all outstanding RSU awards was $5.6 million and is expected to be recognized over a weighted-average period of 2.9 years. As of December 31, 2017, the remaining unrecognized compensation expense related to all outstanding RSU awards was $6.2 million and is expected to be recognized over a weighted-average period of 3.4 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, and, in the case of equity-based awards subject to a profits interest threshold granted before the Reorganization, based on the estimated time to liquidity.
- *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 does not have sufficient history to estimate the volatility of the price of its common equity or the expected term of its options. The Company calculates expected volatility based on historical volatility data of a representative group of companies that are publicly traded. The Company selected representative companies with comparable characteristics to it, including risk profiles and position within the industry, and with historical equity price information sufficient to meet the expected term of the equity-based awards. The Company computes the historical volatility of this selected group using the daily closing prices for the selected companies' equity during the equivalent period of the calculated expected term of its equity-based awards. The Company will continue to use the representative group volatility information until the historical volatility of its equity is relevant to measure expected volatility for future option grants.
- *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 year ended December 31, 2018. The Company did not grant any options to acquire shares of the Company's common stock to employees during the year ended December 31, 2017.

	Year Ended December 31, 2018
Expected term (in years)	6.1
Risk-free interest rates	2.8%
Dividend yield	—
Expected volatility	87.4%

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.

As of December 31, 2018 the Company has incurred net taxable losses, and accordingly, no current provision for income taxes has been recorded. This amount differs from the amount computed by applying the U.S. federal income tax rate of 21.0% to pretax loss due to the provision of a valuation allowance to the extent of the Company's net deferred tax asset. As of December 31, 2017, the net state deferred tax asset was $90,000, and the net federal deferred tax asset was $36,000.

The 2017 Tax Act, which was signed into law on December 22, 2017, has resulted in significant changes to the U.S. corporate income tax system. These changes include, among others, a federal statutory rate reduction from 35% to 21%, the elimination or reduction of certain domestic deductions and credits and limitations on the deductibility of interest expenses and executive compensation expenses. The 2017 Tax Act also transitions international taxation from a worldwide system to a modified territorial system and includes base erosion prevention measures on non-U.S. earnings. These changes are effective beginning in 2018. The Company accounts for changes in tax rates and tax laws in the period of enactment. As a result, for 2017, due to the reduction in the corporate income tax rate with the enactment of the 2017 Tax Act, the Company recorded a tax expense of $22,000 related to the revaluation of its net deferred tax assets. The Company has determined that the various other provisions of the 2017 Tax Act did not have a material impact on the Company's results of operations or financial condition, largely because of the amount of the Company's net operating loss carryover and the Company has no unrepatriated foreign earnings. According to the 2017 Tax Act, our net operating loss, or NOL, generated in tax years beginning after December 31, 2017 may be carried forward indefinitely.

Income tax expense (benefit) consisted of the following:

	Year Ended December 31,	
	2018	2017
	(in thousands)	
Current:		
Federal	$ —	$ (599)
State	—	(80)
Total Current	—	(679)
Deferred:		
Federal	(987)	(300)
State	(308)	(36)
Change in valuation allowance	1,331	—
Total Deferred	36	(336)
Total income tax expense (benefit)	$ 36	$ (1,015)

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

	Year Ended December 31,	
	2018	2017
Tax provision at Federal statutory rate	21.00%	34.00%
State taxes	4.37%	0.78%
Other	1.96%	1.54%
Impact of tax reform (1)	0.00%	-0.02%
Stock based compensation	-4.08%	-2.13%
Change in valuation allowance	-23.90%	—
Tax provision	-0.65%	34.17%

(1) The effective tax rate for the year ended December 31, 2017 includes the Company's estimate of the effect of the 2017 Tax Act, which primarily relates to the remeasurement of existing deferred taxes as a result of the change to the U.S. federal corporate income tax rate.

The following table summarizes the elements of the deferred tax assets (liabilities):

	Year Ended December 31,	
	2018	2017
	(in thousands)	
Deferred tax assets		
Accrued vacation and other accrued expenses	$ 118	$ 96
Provision for bad debts	136	65
Net operating losses	699	148
Stock based compensation	579	594
Unrealized loss on investments	21	37
State income taxes	9	6
Foreign	343	118
Credits	261	—
Gross deferred tax assets	2,166	1,064
Less: Valuation allowance	(1,448)	(118)
Net deferred tax assets	718	946
Deferred tax liabilities		
Depreciation	644	820
Other	74	—
Total deferred tax liabilities	718	820
Net deferred tax assets (liabilities)	$ —	$ 126

During 2018 and 2017 the Company recorded a deferred tax asset related to its equity method investment in FF Gene Biotech. When realized, the asset will generate a capital loss which may only be used to offset capital gain income. The Company does not currently have any capital gain income and has therefore 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 income tax filing requirements in any foreign jurisdiction, nor are any taxes withheld from income taxes withheld from foreign sales. As of December 31, 2018, there were no pending tax audits in any jurisdiction.

There were no tax-related interest or penalties accrued at December 31, 2018 and 2017.

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.

FASB ASC 740 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 benefit of its deferred tax assets, primarily as a result of operating losses in recent years and, accordingly, has provided a full valuation allowance at December 31, 2018.

Note 12. Income (Loss) per Share

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

	Years Ended	
	2018	2017
	(in thousands, except per share data)	
Net loss	$ (5,607)	$ (2,510)
Weighted-average common shares - outstanding, basic	17,978	17,739
Weighted-average common shares - outstanding, diluted	17,978	17,739
Net loss per common share, basic	$ (0.31)	$ (0.14)
Net loss per common share, diluted	$ (0.31)	$ (0.14)

The following securities have been excluded from the calculation of diluted income (loss) per share for all periods presented because their effect would have been anti-dilutive:

	Years Ended	
	2018	2017
	(in thousands)	
Options	413	464
RSUs	857	526

The anti-dilutive shares described above were calculated using the treasury stock method. During the years ended December 31, 2018 and 2017, the Company had outstanding options and RSUs that were excluded from the weighted-average share calculation for continuing operations due to the Company's net loss positions.

Note 13. Retirement Plans

The Company offers a 401(k) retirement savings plan (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 $176,000 and $108,000 in the years ended December 31, 2018 and 2017, respectively.

Note 14. Related Party

Dr. Yun Yen, who is a member of the Company's Board of Directors and a stockholder, serves as the President and Chairman of the Board for the Sino-American Cancer Foundation (the "Foundation") and served as the President for the Taipei Medical University (the "University"), from August 1, 2011 through July 31, 2016 and currently serves as a Chair Professor for the University.

From time to time, the Company performs research testing services, on an arms-length basis, for the Foundation. The Company recognized zero during the years ended December 31, 2018 and 2017, as consideration for such services. Additionally, the Company subleases certain of its headquarters facilities to the Foundation. The Company recognized $33,000 and $22,000 in the years ended December 31, 2018 and 2017, respectively, as consideration for such sublease. As of December 31, 2018 and 2017, zero was owed to the Company by the Foundation in connection with these relationships.

From time to time, the Company performs genetic sequencing services, on an arms-length basis, for the University. The Company recognized $66,000 and $82,600 in the years ended December 31, 2018 and 2017, respectively, as consideration for such services. As of December 31, 2018 and 2017, $51,000 and $40,000, respectively, was owed to the Company by the University in connection with this relationship.

As more fully described in Note 15, in April 2017, the Company, through an affiliated company formed for the purpose of the relationship, entered into a cooperation agreement (the "JV Agreement") with Xilong Scientific Co., Ltd. ("Xilong Scientific") and Fuzhou Jinqiang Investment Partnership (LP) ("FJIP") to form a joint venture under the laws of the PRC called Fujian Fujun Gene Biotech Co., Ltd. ("FF Gene Biotech"). Xilong Scientific is an affiliate of Xi Long, which, as of December 31, 2018, owned 11% of the outstanding shares of the Company's common stock, and FJIP is owned by key management of FF Gene Biotech, including Dr. Han Lin Gao, the Chief Scientific Officer and a large stockholder of the Company and the owner of approximately 25% of FJIP.

Fulgent Pharma utilizes space in the facility at which the Company's laboratory and corporate headquarters are located. Since the completion of the Pharma Split-Off, Fulgent Pharma reimburses the Company, on an arms-length basis, for the portion of the rent the Company pays that is attributable to the space used by Fulgent Pharma, which amounts are not significant. As of December 31, 2018 and 2017, $22,000 and $3,000, respectively, was owed to the Company by Fulgent Pharma as a result of this arrangement, which is recorded in Other receivable in Other current assets in the accompanying consolidated balance sheets.

Note 15. Equity Method Investments

In April 2017, the Company, through an affiliated company formed for the purpose of the relationship, entered into the JV Agreement with Xilong Scientific and FJIP to form FF Gene Biotech, a joint venture formed under the laws of the PRC to offer genetic testing services to customers in the PRC. Pursuant to the terms of the JV Agreement, the Company has agreed to contribute to FF Gene Biotech genetic sequencing and other equipment with a total cost of 60,000,000 renminbi ("RMB") over a three-year period for a 30% ownership interest in FF Gene Biotech, Xilong Scientific has agreed to contribute to FF Gene Biotech 102,000,000 RMB over a three-year period for a 51% ownership interest in the FF Gene Biotech, and FJIP has agreed to contribute to FF Gene Biotech 19,000,000 RMB over a five-year period for a 19% ownership interest in FF Gene Biotech. The Company's maximum exposure to fund losses of FF Gene Biotech as a result of its minority ownership of this entity is equal to its contribution obligation under the JV Agreement as described above. As of December 31, 2018, 40,300,000 RMB (or approximately $5.9 million U.S. dollars) remained to be contributed to FF Gene Biotech by the Company under the terms of the JV Agreement, and the Company has purchased and contributed equipment with an aggregate fair value of $3.0 million pursuant to its contribution commitment under the JV Agreement, of which, $510,000 and $2.5 million were contributed in the year ended December 31, 2018 and 2017, respectively. The Company accounted for this contribution in accordance with ASC 845, Nonmonetary Transactions, and recorded an investment based on the fair value of the contributed equipment, which is the same as carryover basis.

The Company concluded FF Gene Biotech is a variable interest entity as FF Gene Biotech lacks sufficient capital to operate independently. The Company concluded that it alone does not have the power to direct the most significant activities of FF Gene Biotech and therefore is not the primary beneficiary of the entity. Judgment regarding the level of influence over FF Gene Biotech includes 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 accounts for its 30% interest in FF Gene Biotech using the equity method of accounting. The Company recorded its proportionate share of the losses of FF Gene Biotech for the year ended December 31, 2018 in the accompanying consolidated statements of operations, and recorded its contribution during the period, net of its proportionate share in the accumulated losses of FF Gene Biotech, in the accompanying consolidated balance sheet as of December 31, 2018.

The Company has entered into a license agreement with FF Gene Biotech, pursuant to which it granted FF Gene Biotech a license to use certain of the Company's clinical molecular diagnostic gene detection technology and related software and proprietary reference library of genetic information, along with any improvements on this technology the Company may develop during the term of the license agreement. Under the license agreement, FF Gene Biotech will pay to the Company, on a quarterly basis, certain royalties based on the revenues of FF Gene Biotech. The Company earned an insignificant amount of royalties under the license agreement for the year ended December 31, 2018.

In November 2017, FF Gene Biotech invested and formed a majority-owned subsidiary that focuses on sales and marketing for FF Gene Biotech. The financial information of the subsidiary is consolidated in the summarized financial information for FF Gene Biotech disclosed below.

Equity method investments as of December 31, 2018 and 2017 consisted of the following:

	December 31,			
	2018		2017	
	Carrying Value	Ownership Percentage	Carrying Value	Ownership Percentage
	(in thousands)		(in thousands)	
FF Gene Biotech	$ 1,512	30%	$ 1,937	30%
Total equity method investments	$ 1,512	30%	$ 1,937	30%

Summary Financial Information

Summary financial information for FF Gene Biotech is as follows:

	December 31,	
	2018	2017
Consolidated Balance Sheet Data:	(in thousands)	
Current Assets	$ 1,916	$ 2,474
Non-Current Assets	4,068	4,851
Current Liabilities	2,415	942
Non-Current Liabilities	—	—
Minority Interest	—	—
Stockholders' Equity	3,569	6,383

	Years Ended December 31,	
	2018	2017
Consolidated Statement of Operations Data:	(in thousands)	
Net Sales	$ 1,254	$ 90
Gross Profit	67	10
Net Loss	(3,101)	(2,318)
Share of loss from investments accounted for using the equity method (1)	(935)	(524)

(1) The Company's share of loss is based on pro-rated net loss beginning April 25, 2017, the date on which the Company entered into the JV Agreement.

Note 16. Selected Quarterly Financial Data (Unaudited)

The tables below set forth the Company's quarterly consolidated statements of operations data for the eight quarters ended December 31, 2018. 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, 2018	Sept. 30, 2018	June 30, 2018	Mar. 31, 2018	Dec. 31, 2017	Sept. 30, 2017	June 30, 2017	Mar. 31, 2017
	(dollars in thousands, except per share data)							
Statement of Operations Data:								
Revenue	$ 5,673	$ 5,625	$ 5,400	$ 4,653	$ 4,281	$ 4,503	$ 4,640	$ 5,306
Cost of revenue	2,769	2,612	2,544	2,772	2,545	2,268	1,879	1,859
Gross profit	2,904	3,013	2,856	1,881	1,736	2,235	2,761	3,447
Operating expenses:								
Research and development	1,426	1,438	1,212	1,458	1,324	1,128	920	851
Selling and marketing	1,128	1,115	1,279	1,130	1,080	1,383	851	891
General and administrative	1,379	1,306	1,366	1,487	1,402	1,205	1,140	1,486
Total operating expenses	3,933	3,859	3,857	4,075	3,806	3,716	2,911	3,228
Operating income (loss)	(1,029)	(846)	(1,001)	(2,194)	(2,070)	(1,481)	(150)	219
Interest and other income, net	98	143	98	95	97	145	120	119
Income (loss) before income taxes and equity loss in investee	(931)	(703)	(903)	(2,099)	(1,973)	(1,336)	(30)	338
Provision for (benefit from) income taxes	888	(318)	(100)	(434)	(596)	(415)	(110)	106
Income (loss) before equity loss in investee	(1,819)	(385)	(803)	(1,665)	(1,377)	(921)	80	232
Equity loss in investee	(234)	(210)	(246)	(245)	(247)	(172)	(105)	-
Net income (loss)	$ (2,053)	$ (595)	$ (1,049)	$ (1,910)	$ (1,624)	$ (1,093)	$ (25)	$ 232
Net income (loss) per common share:								
Basic	$ (0.11)	$ (0.03)	$ (0.06)	$ (0.11)	$ (0.09)	$ (0.06)	$ (0.00)	$ 0.01
Diluted	$ (0.11)	$ (0.03)	$ (0.06)	$ (0.11)	$ (0.09)	$ (0.06)	$ (0.00)	$ 0.01

COMMERCIAL LEASE

This Lease is made and entered into between **E & E Plaza, LLC,** herein called Lessor, and **Fulgent Therapeutics, LLC.** herein called Lessee.

Lessee hereby offers to lease from Lessor the premises situated in the City of **Temple City** County of **Los Angeles**, State of California, described as **4978 Santa Anita Ave. #101,#102,#103,#104,#105,#201,#202,#203,#204&,#205, Temple City, CA 91780 ,** with approximate 12,095 square feet upon the following TERMS and CONDITIONS:

1. **Term and Rent.** Lessor demises the above premises for a term of **Three (3) years,** commencing on **February 1, 2018** and terminating on **January 31, 2021** or sooner as provided herein at the annual rental **Two Hundred Sixty-eight Thousand Five Hundred Nine Dollars ($268,509.00)** payable in equal monthly installments of **$22,375.75** in advance on the first day of each month for that month's rent during the term of this lease. All rental payments shall be made to **E & E Plaza, LLC** at the following address: **Ideal Property at 625 East Main Street Alhambra CA 91801**

2. **Late Charge.** In the event Tenant is more than **Five (5)** days late in paying any installment of Rent due under this Lease, Tenant shall pay landlord a late charge equal to **5%** of the delinquent Installment of rent.

3. **Security Deposit.** Lessee shall deposit with Lessor on the signing of this lease the sum of **Twenty Thousand Nine Hundred Fifty-Four Dollars and 37 Cents ($20,954.37)** which is transferred from existing lease agreement as security for the performance of Lessee's obligations under this lease, including without limitation the surrender of possession of the premises to Lessor as herein provided. If Lessor applies any part of the deposit to cure any default of Lessee, Lessee shall on demand deposit with Lessor the amount so applied so that Lessor shall have the full deposit on hand at all times during the term of this lease.

4. **Adjustment to the Rent.** The monthly rent of $22,375.75 ($1.85/sq.ft.) specified herein shall be fixed and no adjustment in this three years lease.

5. **Use.** Lessee shall use and occupy the premises for **Lab and Pharmaceutical Business.** The premises shall be used for no other purpose. Lessor represents that the premises may lawfully be used for such purpose.

6. **Care and Maintenance of Premises.** Lessee acknowledges that the premises are generally in good order and repair, unless otherwise indicated herein. Lessee shall, at his own expenses and at all times, maintain the premises in good and safe condition, including plate glass, flooring, painting, interior walls, electrical wiring & lights, plumbing, HVAC system, front iron sliding gate and any other system or equipment exclusively used for that premises and shall surrender the same, at termination hereof, in as good condition as received, normal wear and tear excepted. Lessee shall be responsible for all repairs required, except the roof, exterior walls, and structural foundations, which shall be maintained and repaired by Lessor.

7. **Alterations.** Lessee shall not, without first obtaining the written consent of Lessor, make any alterations, additions, or improvements, in, to or about the premises.

8. **Ordinances and Statutes.** Lessee shall comply with all statutes, ordinances and requirements of all municipal, state and federal authorities now in force, or which may hereafter be in force, pertaining to the premises, occasioned by or affecting the use thereof by Lessee.

9. **Assignment and Subletting.** Lessee shall not assign this lease or sublet any portion of the premises without prior written consent of the Lessor, which shall not be unreasonably withheld. Any such assignment or subletting without consent shall be void and Lessor, at his/her option, may terminate this lease.

10. **Utilities.** All applications and connections for necessary utility services on the demised premises shall be made in the name of Lessee only, and Lessee shall be solely liable for utility charges as they become due, including but not limited, those for electricity, and telephone services. Lessor shall be responsible for water, trash pick-up (two trash bin with 2 times each per week) and gardening service.

11. **Entry and Inspection.** Lessee shall permit Lessor or Lessor's agents to enter upon the premises at reasonable times and upon reasonable notice, for the purpose of inspecting the same, and will permit Lessor at any time within **sixty (60) days** prior to the expiration of this lease, to place upon the premises any usual "To Let" or "For Lease" signs, and permit persons desiring to lease the same to inspect the premises thereafter.

12. **Possession. If** Lessor is unable to deliver possession of the premises at the commencement hereof, Lessor shall not be liable for any damage caused thereby, nor shall this lease be void or voidable, but Lessee shall not be liable for any rent until possession is delivered. Lessee may terminate this lease if possession is not delivered within 30 days of the commencement of the term hereof.

13. **Indemnification of Lessor.** Lessor shall not be liable for any damage or injury to Lessee, or any other person, or to any property, occurring on the demised premises or any part thereof, and Lessee agrees to hold Lessor harmless from any claims for damages, no matter how caused.

14. **Insurance**. Lessee, at his expense, shall maintain plate glass and public liability insurance including bodily injury and property damage insuring Lessee and Lessor with minimum coverage as follows:

$ 1,000,000 for general liability insurance.

Lessee shall provide Lessor with a Certificate of Insurance showing Lessor as additional insured. The Certificate shall provide for a ten-day written notice to Lessor in the event of Cancellation or material change of coverage. To the maximum extent permitted by insurance policies, which may be owned by Lessor or Lessee, Lessee and Lessor, for the benefit of each other, waive any and all rights of subrogation, which might otherwise exist.

Tenant shall indemnify and hold Landlord harmless from and against any and all claims arising from Tenant's use or occupancy of the premises or from the conduct of its business or from any activity, work, or things which may be permitted or suffered by tenant in or about the premises including all damages, costs, attorney's fees, expenses and liabilities incurred in the defense of any claim or action or proceeding arising there from. Except for Landlord's willful or grossly negligent conduct, Tenant hereby assumes all risk of damage to property or injury to person in or about the premises from any cause, and Tenant hereby waives all claims in respect thereof against Landlord.

Except for Landlord's willful or grossly negligent conduct, Tenant hereby agrees that Landlord shall not be liable for any injury to Tenant's business or loss of income there from or for damage to the goods, wares, merchandise, or other property of Tenant. Tenant's employees, invitees, customers or any other person in or about the premises: nor shall Landlord be liable for injury to the person of Tenant, Tenant's employees, agents, contractors, or invitees, whether such damage or injury is caused by or results from fire, steam, electricity, gas, water or rain, or from the breakage, leakage, obstruction or other defects of pipes, sprinklers, wires, appliances, plumbing, air-conditioning, or lighting fixtures, or from any other cause, weather such damage results from conditions arising upon the premises or upon other portions of the building in which the premises are a part, or from any other sources or places. Landlord shall not be liable to Tenant for any damages arising from any act or neglect of any other tenant, if any, of the building in which the premises are located.

15. **Eminent Domain.** If the premises or any part thereof or any estate therein, or any other part of the building materially affecting Lessee's use of the premises, shall be taken by eminent domain, this lease shall terminate on the date when title vests pursuant to such taking. The rent, and any additional rent, shall be apportioned as of the termination date, and any rent paid for any period beyond that date shall be repaid to Lessee. Lessee shall not be entitled to any part of the award for such taking or any payment in lieu thereof, but Lessee may file a claim for any taking of fixtures and improvements owned by Lessee, and for moving expense.

16. **Destruction of Premises.** In the event of a partial destruction of the premises during the term hereof, from any cause, Lessor shall forthwith repair the same, provided that such repairs can be made **within sixty (60) days** under existing governmental laws and regulations, but such partial destruction shall not terminate this lease, except that Lessee shall be entitled to a proportionate reduction of rent while such repairs are being made, based upon the extent to which the making of such repairs shall interfere with the business of Lessee on the premises. If such repairs cannot be made within said sixty (60) days, Lessor, at his option, may make the same within a reasonable time, this lease continuing in effect with the rent proportionately abated as aforesaid, and in the event that Lessor shall not elect to make such repairs which cannot be made **within sixty (60) days**, this lease may be terminated at the option of either party. In the event that the building in which the demised premises may be situated is destroyed to an extent of not less than one-third of the replacement costs, thereof, Lessor may elect to terminate this lease whether the demised premises be injured or not. A total destruction of the building in which the premises may be situated shall terminate this lease.

17 **Lessor's Remedies on Default.** If Lessee shall default in the payment when due of any installment of rent herein or in the performance of any other convenant or obligation of Lessee herein, Lessor shall forward written notice, as provided herein, of such default to Lessee, and failure of Lessee to cure such default **within Three (3) days** after the date of receipt of such notice with respect to a default in the payment of rent or **within Thirty (30) days** after the date of receipt of such notice with respect to any other default of Lessee (or, if such other default cannot be cured **within such Thirty(30) day** period, within such reasonable additional time as is necessary to cure such other default, provided that Lessee pursues cure diligently and in good faith), shall thereafter allow Lessor to pursue all remedies provided to Lessor pursuant to state law applicable.

18 **Tax Increase.** In the event there is any increase during any year of the term of this lease in the City, County or State real estate taxes over and above the amount of such taxes assessed for the tax year during which the term of this lease commences, whether because of increased rate or valuation, Lessee shall pay to Lessor upon presentation of paid tax bills an amount equal to **0%** of the increase in taxes upon the year extending beyond the term of the lease, the obligation of Lessee shall be proportionate to the portion of the lease term included in such year. (N/A)

19 **Common Area Expense.** In the event the demised premises are situated in a shopping center or in commercial building in which there are common areas, Lessee agrees to pay his pro-rata share of maintenance, taxes, and insurance for the common area. (N/A)

20 **Attorney's Fees.** In case lawsuit should be brought for recovery of the premises, or for any sum due hereunder, or because of any act which may arise out of the possession of the premises, by either party, the prevailing party shall be entitled to all costs incurred in connection with such action, including a reasonable attorney's fee.

21 **Notices.** Any notice which either party may or is required to give, shall be given by mailing the same, postage prepaid, to Lessee at the premises, or Lessor at the address shown below, or at such other places as may be designated by the parties from time to time.

22 **Heirs, Assigns, Successors.** This lease is binding upon and insures to the benefit of the heirs, assigns and successors in interest to the parties.

23 **Options to Renew.** Provided that Lessee is not in default in the performance of this lease, Lessee shall have one option to renew the lease for additional **Three (3)** years commencing at the expiration of the initial lease term. All of the terms and conditions of the lease shall apply during the renewal term. The option shall be exercised by written notice given to Lessor not **less than 60 days** prior to the expiration of the initial lease term. If notice is not given in the manner provided herein within the time specified, this option shall expire.

24 **Subordination.** This lease is and shall be subordinated to all existing and future liens and encumbrances against the property.

25 **Estoppels Certificate.** Each party, **within (10) days** after notice from the other party, shall execute and deliver to the other party a certificate stating that this Lease is unmodified and in full force and effect, or in full force and effect as modified, and stating the modification. The certificate shall also state the amount of minimum monthly rent, the dates to which the rent has been paid in advance, and the amount of any security deposit or prepaid rent, if any, as well as acknowledging that there are not, to that party's knowledge, any uncured defaults on the part of the other party, or specifying such defaults, if any, which are claimed. Failure to deliver such a certificate **within the ten (10) day** period shall be conclusive upon the party failing to deliver the certificate to the benefit of the party requesting the certificate that this Lease is in full force and effect, that there are no uncured defaults hereunder, and has not been modified except as may be represented by the party requesting the certificate.

26 **Covenants and conditions.** Each provision of this lease performable by Tenant shall be deemed both a covenant and a condition.

27 **Choice of Law.** The parties hereto agree that the laws of the State of California shall govern this Lease.

28 **Tenant Improvement.** Lessee takes all existing units in it's as-is condition and no improvements required now.

29 Miscellaneous. The detailed square footage and security deposit for each unit are as following:

#101 & #102	1350 sq.ft.	$1,998.00
#103	948 sq.ft.	$1,516.80
#104	1260 sq.ft.	$1,864.80
#105	1200 sq.ft.	$1,776.00
#201	1002 sq.ft.	$1,603.20
#202	729 sq.ft.	$911.25
#203	2500 sq.ft.	$3,996.00
#204	1118 sq.ft.	$2,873.28
#205	1988 sq.ft.	$4,415.04
Total	12095 sq.ft.	$20,954.37

Entire Agreement. The foregoing constitutes the entire agreement between the parties and may be modified only by a writing signed by both parties.

Signed this 31st Day of January, 2018

By	/s/ James Xie	By	/s/ Marlene Xu
Lessee:	Fulgent Therapeutics, LLC	Lessor:	E&E Plaza, LLC
	COO		MEMBER
Title:		Title:	

AMENDED AND COMPLETELY RESTATED
STANDARD INDUSTRIAL/COMMERCIAL MULTI-TENANT LEASE-GROSS

RECITALS:

A. Pursuant to that certain Standard Industrial/Commercial Multi-Tenant Lease - Gross dated May 31, 2017, as amended by (i) that certain First Amendment to Standard Industrial/Commercial Multi-Tenant Lease - Gross dated August 17, 2017, and (ii) that certain Second Amendment to Standard Industrial/Commercial Multi Tenant Lease - Gross dated December 31, 2017 (as amended, the "Existing Lease"), Tenant currently leases from Landlord those certain premises commonly known as Suites 110 & 120 containing approximately 3,960 rentable square feet (the "Surrender Premises") located within that certain building at 4399 Santa Anita Avenue, El Monte, CA 91731, and those certain premises commonly known as Suite 214 containing approximately 3,089 rentable square feet (the "Suite 214 Premises") located within the Building (as defined below).

B. Tenant desires to surrender to Landlord the Surrender Premises, retain the Suite 214 Premises, and expand into those certain premises commonly known as Suite 100 containing approximately 8,510 rentable square feet (the "Suite 100 Premises") located within the Building.

C. Landlord and Tenant desire to amend and completely restate the Existing Lease subject to the terms and conditions set forth herein.

1. BASIC PROVISIONS.

1.1. Parties: This Lease ("Lease"), dated for reference purposes only as of April _, 2018, is made by and between 4401 SANTA ANITA CORPORATION, a California corporation ("Landlord"), and FULGENT GENETICS, INC., a Delaware corporation ("Tenant"), (collectively the "Parties" or individually a "Party").

1.2. Premises: The Suite 100 Premises and the Suite 214 Premises, collectively, totaling approximately 11,599 rentable square feet, including all improvements therein or provided by Landlord under the terms of this Lease (the "Premises"), within the **1st** and 2nd floors of an existing building (the "Building") located at 4401 Santa Anita Avenue, El Monte, California 91731, in the City of El Monte, County of Los Angeles, State of California; the floor plan of the Premises is set forth on Exhibit A attached hereto and incorporated herein by this reference. The Premises, the Building, the Common Areas (as defined in Paragraph 2.3) and the land upon which the same are located are a part of a larger commercial project known as "Santa Anita Business Park", which, inclusive of the other buildings therein and the land underlying the same (if any), is referred to herein as the "Project". (See Paragraph 2 for further provisions.)

1.3. Term: Sixty (60) months (the "Term") commencing on June I, 2018 (the "Commencement Date"), and expiring May 31, 2023, unless earlier terminated as provided herein. (See Paragraph_3 for further provisions.) Tenant shall have the option to extend the Term by an additional "Option Term" of thirty-six (36) months pursuant to Paragraph 52 below.

1.4. Base Rent: Base Rent under this Lease shall be as follows:

Months During Tern	Annual Base Rent	Monthly Base Rent
June 1, 2018 - May 31, 2019	$262,603.80	$21,883.65
June l, 2019 - May31,2020	$270,481.92	$22,540.16
June 1, 2020 - May 31, 2021	$278,596.32	$23,216.36
June 1, 2021 - May 31, 2022	$286,954.32	$23,912.86
June 1, 2022 - May 31, 2023	$295,562.88	$24,630.24

Base Rent shall be payable on the first calendar day of each calendar month during the Term. (See Paragraph 4 for further provisions.) Base Rent shall be subject to further adjustment as of the commencement of the Option Term, if the Term is extended by the Option Term in accordance herewith.

1.5. Base Rent Paid Upon Execution: $21,883.65, which shall be applied to Base Rent initially coming due for the Premises under this Lease.

1.6. **Security Deposit:** Landlord currently holds a Security Deposit under the Existing Lease in the amount of Fourteen Thousand Four Hundred and 00/100 Dollars ($14,400.00). Concurrently with the execution of this Lease, Tenant shall deposit with Landlord an additional amount equal to Ten Thousand Six Hundred and 00/100 Dollars ($10,600.00) to increase the Security Deposit to Twenty-Five Thousand and 00/100 Dollars ($25,000.00), which total amount shall be held by Landlord as the Security Deposit in accordance with the terms of this Lease.

1.7. **Permitted Use:** Non-medical, non-governmental general office use (including the operation of a medical software company) and ancillary uses incidental thereto consistent with operation within a first-class general office use office project, and for no other use or purpose.

1.8. **Tenant's Share:** 18.83%, subject to the terms and provisions of Paragraph 4.2.

1.9. **Base Year:** January 1, 2019, through December 31, 2019.

1.10. **Real Estate Brokers:** NAI Capital, as Landlord's broker. (See Paragraph 15 for further provisions.)

1.11. **Guarantor:** None

1.12. **Parking:** Thirty-four (34) parking spaces on the rear surface parking lot serving the Building, eight (8) of which shall be reserved spaces in the covered parking area.

2. PREMISES.

2.1. **Letting.** Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, the Premises, for the Term, at the rental, and upon all of the terms, provisions, covenants and conditions set forth in this Lease. Unless otherwise provided herein, any statement of square footage set forth in this Lease, or that may have been used in calculating rental, is an approximation which Landlord and Tenant agree is reasonable and the rental based thereon is not subject to revision whether or not the actual square footage is more or less.

2.2. **Condition of Premises; Delivery and Acceptance of Premises; Early Access; Certified Access Specialist.** Tenant acknowledges that it is presently in possession of the Suite 214 Premises and is fully aware of the condition of the Suite 214 Premises. Tenant hereby agrees and acknowledges that: (a) it is familiar with and has had the opportunity to investigate the condition of the Premises (including but not limited to the mechanical, electrical and fire sprinkler systems, security, environmental aspects, and compliance with "Applicable Law", as defined in Paragraph 6.3), the present and future suitability of the Premises for Tenant's intended use and compliance of the Premises with all applicable covenants, conditions or restrictions of record and applicable building codes, regulations and ordinances, (b) it has made such investigation as it deems necessary with reference to such matters and assumes all responsibility therefor, and without in any manner derogating from Tenant's obligations set forth herein including, without limitation, those relating to maintenance and repair, Tenant accepts the Premises, including all fixtures, furnishings and equipment, in its present condition, state of repair and operating order and in its present "AS IS" , "WHERE IS" , "WITH ALL FAULTS" condition, and (c) that neither Landlord, nor any of Landlord's agents, has made any oral or written representations or warranties, express or implied, with respect to said matters. Correction of any non-compliance with respect to any of said matters referenced in the immediately preceding sentence shall be the obligation of Tenant at Tenant's sole cost and expense. Notwithstanding the foregoing, Tenant shall be permitted access to the Premises at least seven (7) days prior to the Commencement Date, for purposes of installing Tenant's furniture, fixtures and equipment (including, without limitation, telephone/communication and/or computer systems); provided, that such early access shall be subject to all of the provisions and conditions set forth in this Lease, Tenant shall not interfere with Landlord's Work, Tenant shall provide Landlord with evidence that all insurance required of Tenant under Paragraph 8 of this Lease has been procured and is in effect (but Tenant shall not be required to pay any Base Rent until the Commencement Date), and further provided that Tenant shall coordinate such early access with Landlord's property manager. Pursuant to Section 1938 of the California Civil Code, Landlord hereby advises Tenant that as of the date of this Lease neither the Premises, the Building nor the Project have undergone inspection by a Certified Access Specialist. Further, pursuant to Section 1938 of the California Civil Code, Landlord notifies Tenant of the following: "A Certified Access Specialist (CASp) can inspect the subject premises and determine whether the subject premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the subject premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the subject premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary

to correct violations of construction-related accessibility standards within the premises." Therefore and notwithstanding anything to the contrary contained in this Lease, Landlord and Tenant agree that (i) Tenant may, at its option and at its sole cost, cause a CASp to inspect the Premises and determine whether the Premises complies with all of the applicable construction-related accessibility standards under California law, (ii) the parties shall mutually coordinate and reasonably approve of the timing of any such CASp inspection so that Landlord may, at its option, have a representative present during such inspection, and (iii) Tenant shall be solely responsible for the cost of any repairs necessary to correct violations of construction-related accessibility standards within the Premises, in the Building or at the Project identified by any such CASp inspection, any and all such alterations and repairs within the Premises to be performed by Tenant in accordance with Section 7.3 of this Lease and if any alterations and repairs to other portions of the Building or the Project are required as a result of Tenant's CASp inspection then Tenant shall reimburse Landlord upon demand, as Additional Rent, for the cost to Landlord of performing such alterations and repairs; provided, however, unless such repair or alterations relate solely to other alterations to the Premises which Tenant is obligated to, or elects to, remove upon the expiration or earlier termination of the Term (in which case Tenant shall simultaneously also remove any CASp identified alterations and repairs), Tenant shall have no obligation to remove any repairs or alterations made pursuant to a CASp inspection under this Section 2.2.

2.3. Common Areas. The term "Common Areas" is defined as all areas and facilities outside the Premises and within the exterior boundary line of the Project that are provided and designated by Landlord from time to time for the general non-exclusive use of Landlord, Tenant and of other occupants of the Project and their respective employees, suppliers, shippers, customers and invitees, which may include, without limitation, any parking areas, loading and unloading areas, trash areas, roadways, sidewalks, walkways, parkways, driveways and landscaped areas which may from time to time be included in the Project. Landlord hereby grants to Tenant, for the benefit of Tenant and its employees, suppliers, shippers, customers and invitees, during the Term of this Lease, the non-exclusive right to use, in common with others entitled to such use, the Common Areas as they exist from time to time, subject to any rights, powers and privileges reserved by Landlord under the terms of this Lease or under the terms of any rules or regulations or restrictions governing the use of the Project. Under no circumstances shall the right herein granted to use the Common Areas be deemed to include the right to store any property, temporarily or permanently, in the Common Areas. In the event that any such storage shall occur, then Landlord shall have the right, without notice, in addition to such other rights and remedies that it may have, to remove the property and charge the cost thereof to Tenant, which cost shall be immediately payable as additional rent upon demand by Landlord. Landlord or such other person(s) as Landlord may appoint, shall have the exclusive control and management of the Common Areas and shall have the right, from time to time, to establish, modify, amend and enforce reasonable rules and regulations with respect to the Common Areas. Tenant agrees to abide by and conform to all such rules and regulations, and to cause its employees, suppliers, shippers, customers and invitees to so abide and conform. Landlord shall not be responsible to Tenant for the non-compliance with such rules or regulations by other tenants and users of the Project. Landlord shall have the right, in its sole and absolute discretion, from time to time (a) to make changes to the Common Areas, including, without limitation, changes in the location, size, shape and number of driveways, entrances, parking spaces, parking areas, loading and unloading areas, ingress, egress, direction of traffic, landscaped areas and walkways, so long as reasonable access to the Premises remains available; (b) to close temporarily any of the Common Areas for maintenance and/or repair purposes or to prevent the acquisition of rights in the Common Areas by other persons or entities, so long as reasonable access to the Premises remains available; (c) to designate other land outside the boundaries of the Project to be a part of the Common Areas; (d) to add additional buildings and improvements to the Common Areas; (e) to use the Common Areas while engaged in making additional improvements, repairs or alterations to the Project, or any portion thereof; and (f) to do and perform such other acts and make such other changes in, to or with respect to the Common Areas and/or Project as Landlord may, in the exercise of commercially reasonable business judgment, deem to be appropriate. Tenant shall be entitled to the non-exclusive use of eleven (11) unreserved parking spaces on the rear surface parking lot serving the Building, all at no charge to Tenant.

2.4 Relocation. Landlord shall have the right to relocate the Premises to another part of the Project in accordance with the following: (a) the new Premises shall be substantially the same in size, decor and nature as the Premises described in this Lease and shall be placed in that condition by Landlord at its cost, (b) the physical relocation of the Premises shall be accomplished by Landlord at its cost, (c) Landlord shall give Tenant at least thirty (30) days' notice of Landlord's intention to relocate the Premises, (d) Landlord shall diligently pursue the relocation of the Premises and Base Rent, the Operating Expenses Excess and other rent and charges payable under this Lease shall abate during the period of such relocation, (e) all incidental costs incurred by Tenant as a result of the relocation including, without limitation, costs incurred in changing addresses on stationery, business cards, directories, advertising and other such items shall be paid by Landlord (not to exceed $1,500.00), and (f) Landlord shall not have the right to relocate the Premises more than two times during the Term.

3. TERM; EXISTING LEASE.

3.1 Term. This Lease shall be effective and binding upon the parties from and after the date hereof. The Commencement Date shall be the date set forth in Paragraph 1.3 above, and the Term of this Lease shall be as specified in Paragraph 1.3 above; provided, however, that if for any reason there is any delay in Landlord's delivery of possession of the Premises to Tenant, Landlord shall not be subject to any damages or liability therefor, nor shall such failure affect the validity of this Lease, or the obligations of Tenant hereunder, or extend the Term hereof, but in such case, the "Commencement Date" shall not be deemed to occur until the delivery of possession of the Premises in accordance with this Lease. If the Commencement Date of this Lease does not occur by the date which is two (2) years following the date hereof, this Lease shall automatically terminate without any further action by either of the parties hereto and neither party shall have any obligation or liability hereunder. Any occupancy of the Premises by Tenant prior to the Commencement Date which is not governed by an existing lease expiring upon the Commencement Date shall be subject to the terms and conditions of this Lease.

3.2 Existing Lease. The parties hereby acknowledge and agree that, subject to the Existing Lease governing Tenant's occupancy of the Surrender Premises until the Surrender Date, this Lease amends and completely restates the Existing Lease in its entirety. As an inducement to Landlord to execute this Lease, Tenant hereby represents, warrants and covenants to Landlord as follows:

(a) (i) all conditions of this Lease necessary for the enforceability of this Lease have been satisfied or waived, (ii) Landlord is currently not in default under the Existing Lease, (iii) as of the date hereof, there are no existing claims, defenses or offsets that Tenant has against Landlord nor, to Tenant's knowledge, have any events occurred that would constitute a default on the part of Landlord under the Existing Lease, and (iv) except as provided otherwise in this Lease, Landlord is not required to perform, nor contribute any allowance for, any additional improvements to the Premises.

(b) Tenant hereby generally releases and discharges Landlord, and its members, mangers, officers, directors, partners, submembers and subpartners, and their respective officers, directors, agents, property managers, employees, and independent contractors, both present and past, of and from any and all claims, debts, liabilities, obligations and causes of action, of any kind or nature, known or unknown, based on, arising out of, or connected with, either directly or indirectly, any term, provision, matter, fact, event or occurrence related to or contained in the Existing Lease arising prior to the date hereof.

(c) Tenant shall vacate and surrender the Surrender Premises to Landlord no later than five (5) days after "substantial completion" (as defined below) of the Landlord's Work (the "Surrender Date"), and Tenant shall fully comply with all obligations under the Existing Lease respecting the Surrender Premises up to the Surrender Date, including those provisions relating to the condition of the Surrender Premises and removal of Tenant's property therefrom. Notwithstanding anything to the contrary contained herein, Tenant shall continue to pay Base Rent and the Operating Expenses Excess due under the Existing Lease for the Surrender Premises until the Surrender Date. Accordingly, from and after the Surrender Date, the Surrender Premises shall be deemed surrendered by Tenant to Landlord and the Existing Lease shall be deemed terminated (except as to those provisions which expressly survive termination of the Existing Lease).

(d) For the avoidance of doubt, all early termination options contained in the Existing Lease, including, without limitation, those granted in Paragraph 54 of the Existing Lease and Section 12 of the Second Amendment to the Existing Lease, are hereby deemed terminated, null and void.

4. RENT.

4.1. Base Rent. Tenant shall pay Base Rent under this Lease in the amount and at the times specified in Paragraph 1.4 above. Tenant shall cause payment of Base Rent, the Operating Expenses Excess and other rent or charges, as the same may be adjusted from time to time, to be received by Landlord pursuant to this Lease, in lawful money of the United States, without demand, offset, abatement or deduction, on or before the day on which it is due under the terms of this Lease. Base Rent, the Operating Expenses Excess and all other rent and charges for any period during the Term hereof which is for less than one (1) full calendar month shall be prorated based upon the actual number of days of the calendar month involved. Payment of Base Rent, the Operating Expenses Excess and other rent and charges shall be made to Landlord at its address stated herein or to such other persons or at such other addresses as Landlord may from time to time designate in writing to Tenant.

4.2. Operating Expenses.

(a) For purposes of this Lease, ‘‘Operating Expenses” shall mean the sum of ‘‘Common Area Expenses” (as hereinafter defined), costs incurred by Landlord in performance of obligations with respect to the buildings and improvements in the Project as are provided with respect to the Building in Paragraph 7.2 below, costs incurred by Landlord in maintaining insurance with respect to the Project as is set forth with respect to the Building in Paragraph 8.3 below, the amount of any insurance deductible with respect to the Project in the event of casualty as is set forth with respect to the Building in Paragraph 8.3 below, and costs incurred by Landlord in payment of Real Property Taxes with respect to the Project pursuant to Paragraph 10.1 below, and costs incurred to provide utility services to the Premises pursuant to Paragraph 11 below. For purposes of this Lease, "Common Area Expenses" shall mean all costs incurred by Landlord for the operation, management, repair, maintenance and replacement, in neat, clean, good order and condition, of the Common Areas and all assessments and/or charges payable under easements and/or other agreements respecting use of parking areas and/or Common Areas serving the Project, including, without limitation, any parking areas, loading and unloading areas, trash areas, roadways, sidewalks, walkways, parkways, driveways, landscaped areas, striping, bumpers, irrigation systems, lighting facilities, fences and gates, costs of causing the Common Areas to comply with Applicable Laws, costs incurred by Landlord in maintaining a policy of liability insurance pursuant to Paragraph 8.2 below, and the cost of water, gas and electricity to service the Common Areas. The parties hereby acknowledge that certain Operating Expenses relate only to the office building portion of the Project and that other Operating Expenses relate to the entire Project. Accordingly, Landlord shall establish cost pools for the components of Operating Expenses relating only to the office building portion of the Project and for Operating Expenses relating to the entire Project, and shall reasonably in good faith allocate Operating Expenses between such cost pools. For purposes of this Lease, "Tenant’s Share" shall mean a fraction, the numerator of which is the rentable area of the Premises and the denominator of which is the rentable area within the Project from time to time. As of the Commencement Date, Tenant’s Share shall be equal to the percentage set forth in Paragraph 1.8; provided, that in the event Landlord makes changes to the Common Area in the Building, Landlord may re-measure the Building’s rentable square footage and may adjust Tenant’s Share based on such re-measurement.

(b) Tenant shall pay to Landlord, as additional rent, each year during the Term, the amount, if any, by which Tenant’s Share of Operating Expenses for such year increases over the amount of Tenant’s Share of Operating Expenses for the ‘‘Base Year”, as defined in Paragraph 1.9 above (the ‘‘Operating Expenses Excess”); provided, that in calculating such Operating Expenses Excess for any partial year including the date of the expiration of the Lease Term or earlier termination of the Lease, the amount of Tenant’s Share of Operating Expenses for the Base Year shall be equitably prorated. Tenant shall not be entitled to any refund or credit if the amount of Tenant’s Share of Operating Expenses for any year following the Base Year is less than the amount of Tenant’s Share of Operating Expenses for the Base Year. Tenant shall pay such yearly Operating Expenses Excess for each year during the Term following the Base Year, within ten (10) days after Tenant’s receipt of a reasonably detailed statement therefor from Landlord; provided, however, that at Landlord’s option, an amount may be estimated by Landlord from time to time of such Operating Expenses Excess and the same shall be payable monthly or quarterly, as Landlord shall designate, in advance, during each year of the Lease Term, on the same day as the Base Rent is due hereunder. In the event of payment of such Operating Expenses Excess on an estimated basis, Landlord shall have the right to adjust its estimate of such amount from time to time during the Lease Term upon written notice to Tenant, based upon reasonably anticipated changes in the amount of Operating Expenses. For any year during which such Operating Expenses Excess is so paid on an estimated basis, within one hundred twenty (120) days following the end of such year or as soon thereafter as information becomes available to Landlord, Landlord shall deliver to Tenant a statement of actual Operating Expenses for such year and the actual Operating Expenses Excess, and if Tenant has overpaid Tenant’s obligation for such Operating Expenses Excess, Tenant shall be entitled to a credit against the Operating Expenses Excess next coming due under this Lease in the amount of such overpayment (except that any such overpayment allocable to the final year of the Lease Term shall be refunded to Tenant following the satisfaction of all Tenant obligations under this Lease), and if Tenant has underpaid the Operating Expenses Excess, Tenant shall pay any such deficiency to Landlord within thirty (30) days following receipt of such statement. Landlord’s obligation to make such refund and Tenant’s obligation to pay such deficiency, as applicable, shall survive the expiration of the Term or earlier termination of this Lease. In the event that the Project is, on average, less than ninety-five percent (95%) occupied during the Base Year or any subsequent year during the Term, then for purposes of calculating Operating Expenses for such year, the components of Operating Expenses which vary based upon occupancy shall be adjusted to reflect such amounts as would have been incurred had the Project been, on average, ninety-five percent (95%) occupied during such year.

5. SECURITY DEPOSIT. Upon the execution of this Lease, Tenant shall deposit with Landlord the sum of the Security Deposit set forth in Paragraph 1.6, as security for Tenant’s faithful performance of Tenant’s obligations under this Lease. If Tenant fails to pay Base Rent or other rent or charges due hereunder, or otherwise ‘‘Defaults” (as defined in Paragraph 13.1) under this Lease, Landlord may use, apply or retain all or any portion of said Security Deposit for the payment of any amount due Landlord or to reimburse or compensate Landlord for any liability, cost, expense, loss or damage

(including attorneys' fees) which Landlord may suffer or incur by reason thereof. If Landlord uses or applies all or any portion of said Security Deposit, within ten (10) days after Landlord's written request therefor, Tenant shall deposit with Landlord funds sufficient to restore said Security Deposit to the full amount required by this Lease. Landlord shall not be required to keep all or any part of the Security Deposit separate from its general accounts. If Tenant performs all of Tenant's obligations hereunder, Landlord shall, at the expiration or earlier termination of the Term hereof and after Tenant has vacated the Premises, return to Tenant (or, at Landlord's option, to the last assignee, if any, of Tenant's interest herein), that portion of the Security Deposit not used or applied by Landlord. No part of the Security Deposit shall be considered to be held in trust, to bear interest or other increment for its use, or to be prepayment for any moneys to be paid by Tenant under this Lease.

6. USE.

6.1. Use. Tenant shall use and occupy the Premises only for the purposes set forth in Paragraph 1.7 and for no other use or purpose. Tenant shall be solely responsible, at Tenant's cost, for obtaining any necessary permits and approvals for occupancy of the Premises for such permitted use. Tenant shall not use or permit the use of the Premises in a manner that creates waste or a nuisance, or that disturbs owners and/or occupants of, or causes damage to, neighboring premises or properties. Subject to the provisions of this Lease, Tenant shall be permitted access to the Premises on a twenty-four (24) hours per day, seven (7) days per week basis.

6.2. Hazardous Substances.

(a) **Prohibition on Hazardous Substances.** The term "Hazardous Substance" as used in this Lease shall mean any product, substance, chemical, material or waste whose presence, nature, quantity and/or intensity of existence, use, manufacture, disposal, transportation, spill, release or effect, either by itself or in combination with other materials on the Premises or other portions of the Building and/or Project, is either: (i) potentially injurious to the public health, safety or welfare, the environment or the Premises and/or other portions of the Building and/or Project, (ii) regulated or monitored by any governmental authority, or (iii) a basis for liability of Landlord to any governmental agency or third party under any applicable statute or common law theory. Hazardous Substance shall include, but not be limited to, hydrocarbons, petroleum, gasoline, crude oil or any products, by-products or fractions thereof. Tenant represents and warrants to Landlord that Tenant's business and all activities to be performed by Tenant in, on or about the Premises, Building and/or Project shall comply with all Applicable Laws respecting Hazardous Substances and Tenant agrees to change any such activity or install any equipment, safety devices, pollution control systems and/or other installations as may be required at any time during the Lease Term to comply therewith. Tenant shall not cause or permit any Hazardous Substance to be brought upon, kept, or used in or about the Premises, Building and/or Project by Tenant, its agents, employees, contractors or invitees, without the prior written consent of Landlord and Tenant represents and warrants that in the operation of its business from the Premises, it shall not use any Hazardous Substances in, upon or about the Premises. If Tenant breaches the obligations stated in the preceding sentence, or if the presence of Hazardous Substance on the Premises, Building and/or Project caused or permitted by Tenant or otherwise caused to be located upon the Premises, Building and/or Project during the Lease Term results in contamination of the Premises, Building, Project and/or any adjacent property, then Tenant shall indemnify, defend and hold Landlord harmless from any and all claims, judgments, damages, penalties, fines, costs, liabilities or losses (including, without limitation, diminution in value of the Premises, Building, Project and/or adjacent property, damages for the loss or restriction on use of rentable or usable space or of any amenity of the Premises, Building, Project and/or adjacent property, damages arising from any adverse impact on marketing of the Premises, Building, Project and/or adjacent property, and sums paid in settlement of claims, attorneys' fees, consultant fees and expert fees) which arise during or after the Lease Term as a result of such contamination. This indemnification of Landlord by Tenant includes, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work required by any federal, state or local governmental agency or political subdivision because of Hazardous Substance present in the soil or ground water on or under the Premises, Building, Project and/or adjacent property. Without limiting the foregoing, if the presence of any Hazardous Substance on the Premises, Building and/or Project caused or permitted by Tenant results in any contamination of the Premises, Building, Project and/or adjacent property, Tenant shall promptly take all actions at its sole expense as are necessary to return the Premises, Building, Project and/or adjacent property to the condition existing prior to the introduction of any such Hazardous Substance to the Premises, Building, Project and/or adjacent property; provided that Landlord's approval of such actions shall first be obtained, which approval shall not be unreasonably withheld so long as such actions would not potentially have any material adverse long-term or short-term effect on the Premises, Building, Project and/or adjacent property.

(b) **Duty to Inform Landlord.** If Tenant knows, or has reasonable cause to believe, that a Hazardous Substance, or a condition involving or resulting from same, has come to be located in, on, under or about the Premises, Building and/or Project other than as previously consented to by Landlord, Tenant shall immediately give written notice of such fact to Landlord. Tenant shall also immediately give Landlord a copy of any statement, report, notice, registration, application, permit, business plan, license, claim, action or proceeding given to, or received from, any governmental authority or private party, or persons entering or occupying the Premises, concerning the presence, spill, release, discharge of, or exposure to, any Hazardous Substance or contamination in, on, or about the Premises, Building and/or Project.

(c) **Indemnification.** Tenant shall indemnify, protect, defend and hold Landlord, its agents, representatives, employees, lenders and ground landlord, if any, and the Premises, Building and/or Project harmless from and against any and all loss of rents and/or damages, liabilities, judgments, costs, claims, liens, expenses, penalties, permits and attorneys' and consultants' fees arising out of or involving any Hazardous Substance or storage tank. Tenant's obligations under this Paragraph 6 shall include, but not be limited to, the effects of any contamination or injury to person, property or the environment created or suffered by Tenant, and the cost of investigation (including consultants' and attorneys' fees and testing), removal, remediation, restoration and/or abatement thereof, or of any contamination therein involved, and shall survive the expiration or earlier termination of this Lease. No termination, cancellation or release agreement entered into by Landlord and Tenant shall release Tenant from its obligations under this Lease with respect to Hazardous Substances or storage tanks, unless specifically so agreed by Landlord in writing at the time of such agreement.

6.3. Tenant's Compliance with Law. Tenant, shall, at Tenant's sole cost and expense, fully, diligently and in a timely manner, comply with all "Applicable Law", which term is used in this Lease to include all laws, rules, codes, regulations, ordinances, directives, covenants, easements, restrictions, permits, the requirements of any applicable fire insurance underwriter or rating bureau, and the recommendations of Landlord's engineers and/or consultants, relating in any manner to the Premises, and to the extent such compliance is necessitated as a result of Tenant's particular use of or alterations or improvements to the Premises, the Building and/or Common Areas. Tenant's obligation for compliance with Applicable Law pursuant hereto shall include, without limitation, matters pertaining to (i) industrial hygiene, (ii) accessibility or usability of the Premises by disabled persons, (iii) environmental conditions on, in, under or about the Premises, including soil and groundwater conditions, and (iv) the use, generation, manufacture, production, installation, maintenance, removal, transportation, storage, spill or release of any Hazardous Substance or storage tank), now in effect or which may hereafter come into effect, and whether or not reflecting a change in policy from any previously existing policy. Tenant shall, within five (5) days after receipt of Landlord's written request, provide Landlord with copies of all documents and information, including, but not limited to, permits, registrations, manifests, applications, reports and certificates, evidencing Tenant's compliance with any Applicable Law specified by Landlord, and shall immediately upon receipt, notify Landlord in writing (with copies of any documents involved) of any threatened or actual claim, notice, citation, warning, complaint or report pertaining to or involving failure by Tenant or the Premises to comply with any Applicable Law.

6.4. Inspection; Compliance. Landlord and Landlord's "Lender(s)" (as defined in Paragraph 8.3(a)), agents and representatives shall have the right to enter the Premises at any time, in the case of an emergency, and otherwise at reasonable times, for the purpose of inspecting the condition of the Premises and for verifying compliance by Tenant with this Lease and all Applicable Laws, and to employ experts and/or consultants in connection therewith and/or to advise Landlord with respect to Tenant's activities, including but not limited to the installation, operation, use, monitoring, maintenance, or removal of any Hazardous Substance or storage tank on or from the Premises. The costs and expenses of any such inspections shall be paid by the party requesting same, unless a Default or Breach of this Lease, violation of Applicable Law, or a contamination is found to exist or be imminent, or unless the inspection is requested or ordered by a governmental authority as the result of any such existing or imminent violation or contamination. In any such case, Tenant shall upon request reimburse Landlord or Landlord's Lender, as the case may be, for the costs and expenses of such inspections. If Tenant is not in compliance with the requirements of the provisions of this Lease (including, without limitation, the provisions of this Lease relating to Hazardous Substances), Landlord shall have the right, but not the obligation, to immediately enter upon the Premises to remedy any condition caused by Tenant's failure to comply with the requirements of this Lease at Tenant's sole cost. Landlord shall use reasonable efforts to minimize unreasonable interference with Tenant's business as a result of any such entry by Landlord but shall not be liable for any interference caused thereby.

6.5 Prohibited Drug Activities / Cannabis / Marijuana. Tenant agrees that the Premises shall not be used for the use, growing, producing, processing, storing (short or long term), distributing, transporting, or selling of marijuana, cannabis, cannabis derivatives, or any cannabis containing substances **("Cannabis"),** or any office uses related to the same, nor shall Tenant permit, allow or suffer, any of Tenant's officers, employees, agents, servants, licensees, subtenants, concessionaires, contractors and invitees to bring onto the Premises, any Cannabis. Without limiting the foregoing, the prohibitions in this paragraph shall apply to all Cannabis, whether such Cannabis is legal for any purpose whatsoever under state or federal law or both. Notwithstanding anything to the contrary, any failure by Tenant to comply with each of the terms, covenants, conditions and provisions of this paragraph shall automatically and without the requirement of any notice be a Default that is not subject to cure, and Tenant agrees that upon the occurrence of any such Default, Landlord may elect, in its sole discretion, to exercise all of its rights and remedies under this Lease, at law or in equity with respect to such Default. Furthermore Tenant is prohibited from engaging or permitting others to engage in any activity which would be a violation of any state and/or federal laws relating to the use, sale, possession, cultivation and/or distribution of any controlled substances (whether for commercial or personal purposes) regulated under any applicable law or other applicable law relating to the medicinal use and/or distribution of marijuana/Cannabis (otherwise known as the Compassionate Use Act of 1996) **("Prohibited Drug Law Activities").**

7. MAINTENANCE; REPAIRS; UTILITY INSTALLATIONS; TRADE FIXTURES AND ALTERATIONS.

7.1. Tenant's Obligations. Except for items which are the responsibility of Landlord pursuant to Paragraph 7.2 below and subject to Landlord's providing janitorial services as set forth in Paragraph 7.2 below, Tenant shall, at Tenant's sole cost and expense and at all times, keep the Premises interior and Tenant's fixtures and personal property in good order, condition and repair.

7.2. Landlord's Obligations. Subject to the foregoing, Landlord shall keep and maintain in good order, condition and repair the Common Areas, roof, exterior walls, structural parts and structural floor of the Building, interior utility and mechanical systems (such as electrical, plumbing, HVAC, lighting, sprinklers, if any, and life safety systems), and pipes and conduits outside the Premises for the furnishing to the Premises of various utilities (except to the extent that the same are the obligation of the appropriate public utility company), and, in addition, Landlord shall cause customary janitorial service to be provided to the Premises five (5) nights per week (currently, Sunday through Thursday), provided that Landlord shall not be liable for failure to perform janitorial work in the portions of the Premises in use by Tenant later than standard Project business hours of 8:00 a.m. to 6:00 p.m., Monday through Friday and provided that no janitorial service will be provided to kitchen areas (if any) unless requested by Tenant, and if so requested and provided by Landlord, the cost of such janitorial service to kitchen areas will be separately charged to Tenant as additional rent. However, any such repairs or maintenance which are necessitated by the negligence or willful misconduct of Tenant, its servants, agents, employees or contractors or anyone claiming under Tenant, or by reason of the failure of Tenant to perform or observe any condition or agreement contained in this Lease, or caused by alterations, additions or improvements made by Tenant or anyone claiming under Tenant, shall be made by Tenant or, at Landlord's option, by Landlord at Tenant's sole cost and expense. Except to the extent the same is Tenant's responsibility pursuant to Paragraph 6.3 above, Landlord shall cause the Building to be in compliance with the requirements of Applicable Laws. Notwithstanding anything to the contrary contained in this Lease, Landlord shall not be liable to Tenant for failure to make repairs as herein specifically required of it unless Tenant has previously notified Landlord, in writing, of the need for such repairs and Landlord has failed to commence and complete said repairs within a reasonable time following receipt of Tenant's written notification. It is the intention of the Parties that the terms of this Lease govern the respective obligations of the parties as to maintenance and repair of the Premises. Tenant and Landlord expressly waive the benefit of any statute now or hereafter in effect to the extent it is inconsistent with the terms of this Lease with respect to, or which affords Tenant the right to make repairs at the expense of Landlord or to terminate this Lease by reason of, any needed repairs.

7.3. Utility Installations; Trade Fixtures; Alterations.

(a) **Definitions; Consent Required.** The term "Utility Installations" is used in this Lease to refer to all carpeting, window coverings, air lines, power panels, electrical distribution, security, fire protection systems, communication systems, lighting systems and fixtures, heating, ventilating, and air conditioning equipment plumbing, and fencing in, on or about the Premises. The term "Trade Fixtures" shall mean Tenant's machinery and equipment that can be removed without doing material damage to the Premises. The term "Alterations" shall mean any modification of the improvements on the Premises from that which are provided by Landlord under the terms of this Lease, other than Utility Installations or Trade Fixtures, whether by addition or deletion. "Tenant Owned Alterations and/or Utility Installations" are defined as Alterations and/or Utility Installations made by Tenant that are not yet owned by Landlord as defined in Paragraph 7.4(a). Tenant shall not make any Alterations or Utility Installations in, on, under or about the Premises without Landlord's prior written consent. Notwithstanding anything to the contrary contained herein, no addition, alteration, change, installation or improvement shall be made which will weaken the structural strength, lessen the value of, interfere or make inoperable any portion of the Premises or change the architectural appearance of the Premises.

(b) **Consent.** Any Alterations or Utility Installations that Tenant shall desire to make shall be presented to Landlord in written form with proposed detailed plans. All consents given by Landlord, whether by virtue of Paragraph 7.3(a) or by subsequent specific consent, shall be deemed conditioned upon: (i) Tenant's acquiring all applicable permits required by governmental authorities, (ii) the furnishing of copies of such permits together with a copy of the plans and specifications for the Alteration or Utility Installation to Landlord prior to commencement of the work thereon, (iii) the compliance by Tenant with all conditions of said permits in a prompt and expeditious manner, and (iv) Tenant's use of contractors and subcontractors meeting Landlord's reasonable requirements as to use of union labor. Any Alterations or Utility Installations by Tenant during the Term of this Lease shall be done in a good and workmanlike manner, with good and sufficient materials, and in compliance with all Applicable Law. Tenant shall promptly upon completion thereof furnish Landlord with as-built plans and specifications therefor. Landlord may (but without obligation to do so) condition its consent to any requested Alteration or Utility Installation upon Tenant's providing Landlord with a lien and completion bond in an amount equal to one and one-half times the estimated cost of such Alteration or Utility Installation and/or upon Tenant's posting an additional Security Deposit with Landlord under Paragraph 36 hereof.

(c) **Indemnification.** Tenant shall pay, when due, all claims for labor or materials furnished or alleged to have been furnished to or for Tenant at or for use on the Premises, which claims are or may be secured by any mechanics' or materialmen's lien against the Premises or any interest therein. Tenant shall give Landlord not less than ten (10) days' notice prior to the commencement of any work in, on or about the Premises, and Landlord shall have the right to post notices of non-responsibility in or on the Premises as provided by law. If Tenant shall, in good faith, contest the validity of any such lien, claim or demand, then Tenant shall, at its sole expense defend and protect itself, Landlord and the Premises against the same and shall pay and satisfy any such adverse judgment that may be rendered thereon before the enforcement thereof against the Landlord or the Premises. If Landlord shall require, Tenant shall furnish to Landlord a surety bond satisfactory to Landlord in an amount equal to one and one-half times the amount of such contested lien claim or demand, indemnifying Landlord against liability for the same, as required by law for the holding of the Premises free from the effect of such lien or claim. In addition, Landlord may require Tenant to pay Landlord's attorneys' fees and costs in participating in such action if Landlord shall decide it is to its best interest to do so.

(d) **Labor Covenant.** All work performed by or on behalf of Tenant, whether prior to the Commencement Date or any subsequent alterations, additions or improvements to the Premises by Tenant, shall be performed by general contractors or subcontractors pursuant to a current collective bargaining agreement with the Laborers' International Union of North America (the "Laborers"), and all work by or on behalf of Tenant that is work recognized by the AFL-CIO Building and Construction Trades Department as within the jurisdiction of the Laborers, International Brotherhood of Teamsters, International Union of Operating Engineers, or Cement Masons shall be performed by general contractors or subcontractors pursuant to a current, executed agreement between such contractor and one of the foregoing labor unions having jurisdiction over such work, provided that all work claimed by the Laborers shall be performed pursuant to a current, executed agreement with the Laborers. The **"**work covered" description in each of said collective bargaining agreements describing work traditionally performed by union members shall be applicable to the entire Premises, including tenant improvements. Tenant shall be fully responsible for the implementation and enforcement of this requirement and shall indemnify, defend, and save Landlord harmless from any liability, loss, damage or cost resulting from a violation of this requirement. Further, to avoid mechanic's liens and disruptions in work, all Laborers' work shall be performed pursuant to an agreement requiring full Master Labor Agreement contributions to each of the Laborers' trust funds. Tenant shall be responsible for payment of all construction management fees incurred by Tenant and charged by Tenant's project and/or construction managers for Tenant's work and any other additions, alterations or improvements made by Tenant to the Premises.

7.4. Ownership; Removal; Surrender; and Restoration.

(a) **Ownership.** Subject to Landlord's right to require their removal or become the owner thereof as hereinafter provided in this Paragraph 7.4, all Alterations and Utility Installations made to the Premises by Tenant shall be the property of and owned by Tenant, but considered a part of the Premises. Landlord may, at any time and at its option, elect in writing to Tenant to be the owner of all or any specified part of the Tenant Owned Alterations and Utility Installations. Unless otherwise instructed per Paragraph 7.4(b) hereof, all Tenant Owned Alterations and Utility Installations shall, at the expiration or earlier termination of this Lease, become the property of Landlord and remain upon and be surrendered by Tenant with the Premises.

(b) **Removal.** Unless otherwise expressly agreed in writing, Landlord may require that any or all Tenant Owned Alterations or Utility Installations be removed by the expiration of the Term or earlier termination of this Lease, notwithstanding their installation may have been consented to by Landlord. Landlord may require the removal at any time of all or any part of any Tenant Owned Alterations or Utility Installations made without the required consent of Landlord.

(c) **Surrender/Restoration.** Tenant shall surrender the Premises by the end of the last day of the Lease Term or any earlier termination date, with all of the improvements, parts and surfaces thereof clean and free of debris and in good operating order, condition and state of repair, ordinary wear and tear excepted. "Ordinary wear and tear" shall not include any damage or deterioration that would have been prevented by good maintenance practice or by Tenant performing all of its obligations under this Lease. Except as otherwise agreed or specified in writing by Landlord, the Premises, as surrendered, shall include the Utility Installations. The obligation of Tenant shall include the repair of any damage occasioned by the installation, maintenance or removal of Tenant's Trade Fixtures, furnishings, equipment, and Alterations and/or Utility Installations, as well as the removal of any storage tank and the removal, replacement, or remediation of any contaminated soil, material or ground water, all as may then be required by Applicable Law and/or good practice. Tenant's Trade Fixtures shall remain the property of Tenant and shall be removed by Tenant subject to its obligation to repair and restore the Premises per this Lease. Nothing contained in this Paragraph 7.4(c) shall be deemed to limit Tenant's repair and maintenance obligations pursuant to this Lease.

8. INSURANCE; INDEMNITY.

8.1. Liability Insurance - Tenant. Tenant shall obtain and keep in force during the Term of this Lease a Commercial General Liability policy of insurance protecting Tenant and Landlord, Landlord's Lender(s), if any, and Landlord's asset manager (currently, TDA, Inc., a California corporation [''TDA"]) (each as an additional insured) against claims for bodily injury, personal injury and property damage based upon, involving or arising out of the ownership, use, occupancy or maintenance of the Premises and all areas appurtenant thereto. Such insurance shall be on an occurrence basis providing single limit coverage in an amount not less than $2,000,000 per occurrence with an "Additional Insured-Managers or Landlords of Premises" Endorsement and contain the "Amendment of the Pollution Exclusion" for damage caused by heat, smoke or fumes from a hostile fire. The policy shall not contain any intra-insured exclusions as between insured persons or organizations, but shall include coverage for liability assumed under this Lease as an "insured contract" for the performance of Tenant's indemnity obligations under this Lease. The limits of said insurance required by this Lease or as carried by Tenant shall not, however, limit the liability of Tenant nor relieve Tenant of any obligation hereunder. All insurance to be carried by Tenant shall be primary to and not contributory with any similar insurance carried by Landlord, whose insurance shall be considered excess insurance only.

8.2. Liability Insurance - Landlord. In addition to, and not in lieu of, the insurance maintained by Tenant pursuant to Paragraph 8.1 above, Landlord shall obtain and keep in force during the Term of this Lease, as an item of Common Area Expenses, such policies of Commercial General Liability insurance protecting Landlord, Landlord's Lender(s), if any, and Landlord's asset manager against claims for bodily injury, personal injury and property damage based upon, involving or arising out of the ownership, use, occupancy or maintenance of the Project and all areas appurtenant thereto, in such form and amounts and including such coverages as Landlord deems appropriate. Tenant shall not be named as an additional insured under such policies.

8.3. Property Insurance-Building, Improvements and Rental Value.

(a) **Building and Improvements.** Landlord shall obtain and keep in force during the Term of this Lease, as an item of Operating Expenses, a policy or policies in the name of Landlord, with loss payable to Landlord and to the holders of any mortgages, deeds of trust or ground leases on the Premises ("Lender(s)"), insuring loss or damage to the Building, including all improvements, fixtures, furnishings and equipment. However, Tenant Owned Alterations and Utility Installations shall be insured by Tenant under Paragraph 8.4 rather than by Landlord. The amount of such insurance shall be equal to the full replacement cost of the Building, including all improvements, fixtures, furnishings and equipment as the same shall exist from time to time, or the amount required by Lenders. At Landlord's option, such policy or policies shall insure against all risks of direct physical loss or damage (including, without limitation, the perils of flood and earthquake), including coverage for any additional costs resulting from debris removal and reasonable amounts of coverage for the enforcement of any ordinance or law regulating the reconstruction or replacement of any undamaged sections of the Building required to be demolished or removed by reason of the enforcement of any building, zoning, safety or land use laws as the result of a covered cause of loss. Said policy or policies shall also contain an agreed valuation provision in lieu of any coinsurance clause, waiver of subrogation, and inflation guard protection causing an increase in the annual property insurance coverage amount by a factor of not less than the adjusted U.S. Department of Labor Consumer Price Index for All Urban Consumers (All Items) for the city nearest to where the Premises is located. If such insurance coverage has a deductible clause, the deductible shall not exceed commercially reasonable amounts, and in the event of any casualty, the amount of such deductible shall be an item of Operating Expenses.

(b) **Rental Value.** Landlord shall, in addition, obtain and keep in force during the Term of this Lease, as an item of Operating Expenses, a policy or policies in the name of Landlord, with loss payable to Landlord and Lender(s), insuring the loss of the full rental and other charges payable to Landlord by Tenant under this Lease and by other occupants of the Building under their respective leases for one (1) year (including all real estate taxes, insurance costs, and any scheduled rental increases). Said insurance shall provide that in the event any applicable lease is terminated by reason of an insured loss, the period of indemnity for such coverage shall be extended beyond the date of the completion of repairs or replacement of the Building, to provide for one full year's loss of rental revenues from the date of any such loss. Said insurance shall contain an agreed valuation provision in lieu of any coinsurance clause, and the amount of coverage shall be adjusted annually to reflect the projected rental income, property taxes, insurance premium costs and other expenses, if any, otherwise payable to Landlord, for the next twelve (12) month period. Any deductible amount in the event of such loss shall be an item of Operating Expenses.

(c) **Adjacent Premises.** Notwithstanding anything to the contrary contained in this Lease, to the extent the cost of maintaining insurance with respect to the Building and/or any other buildings within the Project is increased as a result of Tenant's acts, omissions, use or occupancy of the Premises, Tenant shall pay for such increase.

8.4. Tenant's Property Insurance. Subject to the requirements of Paragraph 8.5, Tenant at its cost shall either by separate policy or, at Landlord's option, by endorsement to a policy already carried, maintain insurance coverage on all personal property, Tenant Owned Alterations and Utility Installations in, on, or about the Premises similar in coverage to that carried by the Landlord under Paragraph 8.3(a). Such insurance shall be full replacement cost coverage with a deductible of not to exceed commercially reasonable amounts. The proceeds from any such insurance shall be used by Tenant for the replacement of personal property or the restoration of Tenant Owned Alterations and Utility Installations. Tenant shall be the Insuring Party with respect to the insurance required by this Paragraph 8.4 and shall provide Landlord with written evidence that such insurance is in force.

8.5. Insurance Policies. Insurance required hereunder shall be in companies duly licensed to transact business in the state where the Premises are located, and maintaining during the policy term a "General Policyholders Rating" of at least A, X, or such other rating as may be required by a Lender having a lien on the Premises, as set forth in the most current issue of "Best's Insurance Guide." Tenant shall not do or permit to be done anything which shall invalidate the insurance policies referred to in this Paragraph 8. Tenant shall cause to be delivered to Landlord certified copies of policies of such insurance or certificates evidencing the existence and amounts of insurance required to be maintained by Tenant pursuant to this Article 8 with the insureds and loss payable clauses as required by this Lease. No such policy maintained by Tenant shall be cancelable or subject to modification except after thirty (30) days prior written notice to Landlord. Tenant shall at least thirty (30) days prior to the expiration of such policies, furnish Landlord with evidence of renewals or "insurance binders" evidencing renewal thereof, or Landlord may order such insurance and charge the cost thereof to Tenant, which amount shall be payable by Tenant to Landlord upon demand. If Tenant shall fail to procure and maintain the insurance required to be carried by Tenant under this Paragraph 8, Landlord may, but shall not be required to, procure and maintain the same, but at Tenant's expense.

8.6. Waiver of Subrogation. Landlord and Tenant hereby mutually release each other from liability and waive all right of recovery against each other for any loss in or about the Premises, from perils insured against under the respective property damage insurance policies required to be carried hereunder, whether due to negligence or any other cause; provided that this Paragraph 8.6 shall be inapplicable if it would have the effect, but only to the extent it would have the effect, of invalidating any insurance coverage of Landlord or Tenant. If the waiver of subrogation pursuant hereto results in an additional premium charge to Landlord, Tenant agrees to promptly pay Landlord such additional charge upon receiving a written billing therefor However if such insurance policies cannot be obtained with a waiver of subrogation, the parties are relieved of the obligation to obtain such a waiver hereunder.

8.7. Indemnity. Tenant shall indemnify, protect, defend and hold harmless the Premises, Building, Project, Landlord and its agents and representatives, Landlord's asset manager, Landlord's master or ground landlord, partners and Lenders, from and against any and all claims, loss of rents and/or damages, costs, liens, judgments, penalties, permits, attorneys' and consultants' fees, expenses and/or liabilities arising out of, involving, or in dealing with, the occupancy of the Premises by Tenant, the conduct of Tenant's business, any act, omission or neglect of Tenant, its agents, contractors, employees or invitees, and out of any Default or Breach by Tenant in the performance in a timely manner of any obligation on Tenant's part to be performed under this Lease. The foregoing shall include, but not be limited to, the defense or pursuit of any claim or any action or proceeding involved therein, and whether or not (in the case of claims made against Landlord) litigated and/or reduced to judgment, and whether well founded or not. In case any action or proceeding be brought against Landlord by reason of any of the foregoing matters, Tenant upon notice from Landlord shall defend the same at Tenant's

expense by counsel reasonably satisfactory to Landlord and Landlord shall cooperate with Tenant in such defense. Landlord need not have first paid any such claim in order to be so indemnified. Tenant, as a material part of the consideration to Landlord, hereby assumes all risk of damage to property or injury to persons in, upon or about the Premises and Common Areas arising from any cause and Tenant hereby waives all claims in respect thereof against Landlord. Tenant's obligations under the provisions of this Paragraph 8.7 shall survive the expiration of the Term or earlier termination of this Lease.

8.8. Exemption of Landlord from Liability. Landlord shall not be liable for injury or damage to the person or goods, wares, merchandise or other property of Tenant, Tenant's employees, contractors, invitees, customers, or any other person in or about the Premises, Building and/or Project, whether such damage or injury is caused by or results from fire, steam, electricity, gas, water or rain, or from the breakage, leakage, obstruction or other defects of pipes, fire sprinklers, wires, appliances, plumbing, air conditioning or lighting fixtures, or from any other cause, whether the said injury or damage results from conditions arising upon the Premises, Building or Project, or from other sources or places, and regardless of whether the cause of such damage or injury or the means of repairing the same is accessible or not. Landlord shall not be liable for any damages arising from any act or neglect of any other tenant of Landlord. Notwithstanding Landlord's negligence or breach of this Lease, Landlord shall under no circumstances be liable for injury to Tenant's business or for any loss of income or profit therefrom.

9. DAMAGE OR DESTRUCTION.

9.1. Insured Casualty. If the Premises is partially or totally destroyed by fire or any other peril covered by insurance maintained pursuant to Paragraph 8.3, except as otherwise provided in this Paragraph 9, Landlord shall, within 180 days after the occurrence of such destruction, but only to the extent that proceeds of such insurance are available to Landlord for such purpose, commence reconstruction and restoration of the Premises (but not Tenant's Trade Fixtures, Tenant Owned Alterations and Utility Installations, furnishings, equipment and personal property) and prosecute the same diligently to completion, in which event this Lease shall continue in full force and effect. If, however, insurance proceeds are not sufficient to pay the full cost of such reconstruction, and if the damage or destruction is due to the acts or omissions of Tenant, its agents, employees or contractors, or if Landlord is restricted by any governmental authority, Landlord may elect to either terminate this Lease or pay the cost of such reconstruction. In the event of the repair and/or restoration of the Premises following casualty pursuant to this Paragraph 9, following the completion of such repair and/or restoration, Tenant shall promptly commence and diligently prosecute to completion the repair and restoration of Tenant's Trade Fixtures, Tenant Owned Alterations and Utility Installations, furnishings, equipment and personal property.

9.2. Uninsured Casualty. If the Premises are damaged or destroyed to any extent whatever as a result of any casualty or peril not covered by the insurance maintained pursuant to Paragraph 8.3, Landlord may within 180 days after the occurrence of such destruction: (a) commence reconstruction and restoration of the Premises and prosecute the same diligently to completion, in which event this Lease shall continue in full force and effect; or (b) notify Tenant in writing that it elects not to reconstruct or restore the Premises, in which event this Lease shall cease and terminate as of the date of service of such notice. If Landlord elects to reconstruct the Premises following destruction as a result of any casualty or peril not covered by such insurance, Landlord's and Tenant's obligations with respect to the reconstruction of the Premises shall be as described and limited in Paragraph 9. 1 above.

9.3. Damage Near End of Term. Notwithstanding anything to the contrary contained in Paragraphs 9.1 and 9.2 above, if the Premises is damaged by casualty during the last twelve (12) months of the Term to an extent whereby repairs and/or restoration cannot be completed within the shorter of (i) 90 days or (ii) the remaining Term of this Lease, then Landlord and Tenant each shall have the option to terminate this Lease by giving written notice to the other of the exercise of such option within 60 days after such casualty, in which event this Lease shall cease and terminate as of the date of service of such notice.

9.4. Abatement of Rent. During the period following the casualty until the completion of Landlord's repair and/or restoration of casualty damage to the Premises, Tenant's obligation for payment of Base Rent, Real Property Taxes, insurance premiums and any other recurring charges under this Lease, shall be abated in proportion to the degree to which Tenant's use of the Premises is impaired but only to the extent to which Landlord receives reimbursement for such abatement pursuant to the rental value insurance maintained under Paragraph 8.3(b) above. Except for abatement of Base Rent, Real Property Taxes, insurance premiums, and such other charges, if any, as aforesaid, all other obligations of Tenant hereunder shall be performed by Tenant, and Tenant shall have no claim against Landlord for any damage suffered by reason of any such damage, repair or restoration.

9.5. Termination-Advance Payments. Upon termination of this Lease pursuant to this Paragraph 9, an equitable adjustment shall be made concerning advance Base Rent and any other advance payments made by Tenant to Landlord. Landlord shall, in addition, return to Tenant so much of Tenant's Security Deposit as has not been, or is not then required to be, used by Landlord under the terms of this Lease.

9.6. Waive Statutes. Landlord and Tenant agree that the terms of this Lease shall govern the effect of any damage to or destruction of the Premises with respect to the termination of this Lease and hereby waive the provisions of any present or future statute to the extent inconsistent herewith.

10. REAL PROPERTY TAXES.

10.1. Payment of Taxes. During the Term of this Lease, Landlord shall pay the "Real Property Taxes", as defined in Paragraph 10.2 below, applicable to the Project (as an item of Operating Expenses).

10.2. Definition of "Real Property Taxes." As used herein, the term "Real Property Taxes" shall include any form of real estate tax or assessment, general, special, ordinary or extraordinary, and any license fee, commercial rental tax, improvement bond or bonds, levy or tax (other than inheritance, personal income or estate taxes) imposed upon the Premises, Building and/or Project by any authority having the direct or indirect power to tax, including any city, state or federal government, or any school, agricultural, sanitary, fire, street, drainage or other improvement district thereof, levied against any legal or equitable interest of Landlord in the Premises, Building and/or Project, Landlord's right to rent or other income therefrom, and/or Landlord's business of leasing the Premises, Building and/or Project. The term "Real Property Taxes" shall also include any tax, fee, levy, assessment or charge, or any increase therein, imposed by reason of events occurring, or changes in applicable law taking effect, during the term of this Lease, including but not limited to a change in the ownership of the Premises, Building and/or Project or in the improvements thereon, the execution of this Lease, or any modification, amendment or transfer thereof, and whether or not contemplated by the Parties.

10.3. Personal Property Taxes. Tenant shall pay prior to delinquency all taxes assessed against and levied upon Tenant Owned Alterations, Utility Installations, Trade Fixtures, furnishings, equipment and all personal property contained in the Premises or elsewhere. When possible, Tenant shall cause its Trade Fixtures, furnishings, equipment and all other personal property to be assessed and billed separately from the real property of Landlord. If any of Tenant's said personal property shall be assessed with Landlord's real property, Tenant shall pay Landlord the taxes attributable to Tenant within ten (10) days after receipt of a written statement setting forth the taxes applicable to Tenant's property or, at Landlord's option, as provided in Paragraph 10.1 (b).

11. UTILITIES. Landlord shall pay for the cost of utility service to the Premises during Project business hours of 8:00 a.m. to 6:00 p.m. Monday through Friday, and 9:00 a.m. to 1:00 p.m. Saturdays, other than legal holidays (currently, New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving day and Christmas day), as an item of Operating Expenses. Tenant shall reimburse Landlord for the cost of any utility service to the Premises before or after such Project business hours, based upon Landlord's good faith determination of such costs (inclusive of reasonable administrative fees). Landlord shall not be liable in damages or otherwise for any failure or interruption of any utility service being furnished to the Premises, and no such failure or interruption shall be deemed to constitute an actual or constructive eviction or entitle Tenant to terminate this Lease or withhold any rent or any other sum due under this Lease.

12. ASSIGNMENT AND SUBLETTING.

12.1. Landlord's Consent Required.

(a) Tenant shall not voluntarily or by operation of law assign, transfer, mortgage or otherwise transfer or encumber or enter into a concession, license, management or operating agreement with respect to (collectively, "assignment") or sublet all or any part of Tenant's interest in this Lease or in the Premises without Landlord's prior written consent given under and subject to the terms of Paragraph 36.

(b) A change in the control of Tenant shall constitute an assignment requiring Landlord's consent. The transfer, on a cumulative basis, of twenty-five percent (25%) or more of the voting control of Tenant or of the beneficial ownership of Tenant shall constitute a change in control for this purpose.

(c) The involvement of Tenant or its assets in any transaction, or series of transactions (by way of merger, sale, acquisition, financing, refinancing, transfer, leveraged buy-out or otherwise), whether or not a formal assignment or hypothecation of this Lease or Tenant's assets occurs, which results or will result in a reduction of the Net Worth of Tenant, as hereinafter defined, by an amount equal to or greater than twenty-five percent (25%) of such Net Worth of Tenant as it was represented to Landlord at the time of the execution by Landlord of this Lease or at the time of the most recent assignment to which Landlord has consented, or as it exists immediately prior to said transaction or transactions constituting such reduction, at whichever time said Net Worth of Tenant was or is greater, shall be considered an assignment of this Lease by Tenant to which Landlord may reasonably withhold its consent. "Net Worth of Tenant" for purposes of this Lease shall be the net worth of Tenant (excluding any guarantors) established under generally accepted accounting principles consistently applied.

(d) An assignment or subletting of Tenant's interest in this Lease without Landlord's specific prior written consent shall, at Landlord's option, be a Default curable after notice per Paragraph 13.1(c), or a noncurable Breach without the necessity of any notice and grace period.

12.2. Terms and Conditions Applicable to Assignment and Subletting.

(a) Regardless of Landlord's consent, any assignment or subletting shall not: (i) be effective without the express written assumption by such assignee or subtenant of the obligations of Tenant under this Lease, (ii) release Tenant of any obligations hereunder, or (iii) alter the primary liability of Tenant for the payment of Base Rent and other sums due Landlord hereunder or for the performance of any other obligations to be performed by Tenant under this Lease.

(b) Landlord may accept any rent or performance of Tenant's obligations from any person other than Tenant pending approval or disapproval of an assignment. Neither a delay in the approval or disapproval of such assignment nor the acceptance of any rent or performance shall constitute a waiver or estoppel of Landlord's right to exercise its remedies for the Default or Breach by Tenant of any of the terms, covenants or conditions of this Lease.

(c) The consent of Landlord to any assignment or subletting shall not constitute a consent to any subsequent assignment or subletting by Tenant or to any subsequent or successive assignment or subletting by the subtenant. However, Landlord may consent to subsequent sublettings and assignments of the sublease or any amendments or modifications thereto without notifying Tenant or anyone else liable on the Lease or sublease and without obtaining their consent, and such action shall not relieve such persons from liability under this Lease or sublease.

(d) In the event of any Default or Breach of Tenant's obligations under this Lease, Landlord may proceed directly against Tenant, any Guarantors or anyone else responsible for the performance of the Tenant's obligations under this Lease, including any subtenant, without first exhausting Landlord's remedies against any other person or entity responsible therefor to Landlord, or any security held by Landlord or Tenant.

(e) Each request for consent to an assignment or subletting shall be in writing, accompanied by information relevant to Landlord's determination as to the financial and operational responsibility and appropriateness of the proposed assignee or subtenant, including but not limited to the intended use and/or required modification of the Premises, if any, together with a non-refundable deposit of $1,000 as reasonable consideration for Landlord's considering and processing the request for consent. Tenant agrees to provide Landlord with such other or additional information and/or documentation as may be reasonably requested by Landlord. In determining whether to reasonably consent to a proposed assignment or subletting, (i) it shall not be unreasonable for Landlord to withhold its consent to any such assignment or subletting if a proposed assignee's or subtenant's anticipated or proposed use of the Premises involves the generation storage, use, treatment or disposal of any Hazardous Substance; and (ii) Landlord may consider, among other things, any or all of the following factors: (1) the reputation of the proposed assignee or subtenant (including any principals, partners or shareholders of such assignee or subtenant), including, without limitation, the reputation of the proposed assignee or subtenant for dishonesty, criminal conduct and/or unethical business practices; (2) whether the business experience and quality of business operations of the proposed assignee or subtenant is comparable to that of Tenant; (3) the credit history of the proposed assignee or subtenant; (4) the intended use of the Premises by the proposed assignee or subtenant; and/or (5) whether the use of the Premises by the proposed assignee or subtenant will involve the generation, storage, use, treatment or disposal of any Hazardous Substances, or will in any way increase any potential risk or liability to Landlord arising out of or relating to Hazardous Substances. Should Tenant desire to enter into an assignment or subletting, Tenant shall provide not less than ninety (90) days prior written notice thereof to Landlord setting forth the name of the proposed assignee or subtenant, the term, use,

rental rate and other relevant particulars of the proposed assignment or subletting, including, without limitation, evidence satisfactory to Landlord that the proposed assignee or subtenant will not use, store or dispose of any Hazardous Substances in or on the Premises, and that the proposed assignee or subtenant will immediately occupy and thereafter use the Premises for the entire term of the Lease or the sublease (as the case may be). Such notice shall be accompanied by a copy of the proposed assignment or sublease agreement and any documents or financial information Landlord may require in order to make a determination as to the suitability of the assignee or subtenant.

(f) Any assignee of, or subtenant under, mis Lease shall, by reason of accepting such assignment or entering into such sublease, be deemed, for the benefit of Landlord, to have assumed and agreed to conform and comply with each and every term, covenant, condition and obligation herein to be observed or performed by Tenant during the term of said assignment or sublease.

(g) The occurrence of a transaction described in Paragraph 12.1 (c) shall give Landlord the right (but not the obligation) to require that the Security Deposit be increased to an amount equal to six (6) times the then monthly Base Rent, and Landlord may make the actual receipt by Landlord of the amount required to establish such Security Deposit a condition to Landlord's consent to such transaction.

(h) In the event of any assignment or sublease, Landlord shall receive as additional rent hereunder any and all of Tenant's "Excess Consideration" derived from such assignment or sublease. If Tenant shall elect to assign or sublet, Tenant shall use reasonable and good faith efforts to secure consideration from any such assignee or subtenant which would be generally equivalent to then-current market rent, but in no event shall Tenant's monetary obligations to Landlord, as set forth in this Lease, be reduced. In the event of a sublease, "Excess Consideration" shall mean all rent, additional rent or other consideration actually received by Tenant from such subtenant and/or actually paid by such subtenant on behalf of Tenant in connection with the subletting in excess of the rent, additional rent and other sums payable by Tenant under this Lease during the term of the sublease on a per square foot basis if less than all of the Premises is subleased, less marketing costs, attorneys' fees and brokerage commissions, if any, reasonably incurred by Tenant to procure the sublease, and the cost of any alterations made by Tenant specifically for the benefit of such subtenant. In the event of an assignment, "Excess Consideration" shall mean key money, bonus money or other consideration paid by the assignee to Tenant in connection with such assignment, and any payment in excess of fair market value for services rendered by Tenant to assignee or for assets, fixtures, inventory, equipment, or furniture transferred by Tenant to assignee in connection with such assignment, less marketing costs, attorneys' fees and brokerage commissions, if any, reasonably incurred by Tenant to procure the assignment, and the cost of any alterations made by Tenant specifically for the benefit of such assignee. If part of the Excess Consideration shall be payable by the assignee or subtenant other than in cash, then Landlord's share of such non-cash consideration shall be in such form as is reasonably satisfactory to Landlord.

(i) In addition to Landlord's right of approval of any proposed assignment or subletting and without limiting the other provisions of this Paragraph 12, Landlord shall have the option, in the event of any proposed assignment or subletting, to terminate the Lease as to the affected portion of the Premises as of the proposed effective date of the proposed assignment or subletting set forth in Tenant's notice. Such option to terminate shall be exercised, if at all, by Landlord giving Tenant written notice thereof within sixty (60) days following Landlord's receipt of Tenant's written request. In the event of such termination by Landlord, from and after the effective date of such termination, Landlord and Tenant shall have no further obligations or liabilities to each other with respect to the affected portion of the Premises, except with respect to obligations or liabilities which have accrued as of, or survive, such termination (in the same manner as if such termination date were the date originally fixed for the expiration of the Lease Term). Without in any manner limiting the rights of Landlord, following any such termination by Landlord, Landlord may lease the affected portion of the Premises to the prospective assignee or subtenant proposed by Tenant, without liability to the Tenant. Landlord's failure to exercise such termination right as herein provided shall not be construed as Landlord's consent to the proposed assignment or subletting.

12.3. Additional Terms and Conditions Applicable to Subletting. The following terms and conditions shall apply to any subletting by Tenant of all or any part of the Premises and shall be deemed included in all subleases under this Lease whether or not expressly incorporated therein:

(a) Tenant hereby assigns and transfers to Landlord all of Tenant's interest in all rentals and income arising from any sublease of all or a portion of the Premises heretofore or hereafter made by Tenant, and Landlord may collect such rent and income and apply same toward Tenant's obligations under this Lease, provided, however, that until a Breach (as defined in Paragraph 13.1) shall occur in the performance of Tenant's obligations under this Lease, Tenant may, except as otherwise provided in this Lease, receive, collect and enjoy the rents accruing under such sublease. Landlord shall not, by reason of this or any other assignment of such sublease to Landlord, nor by reason of the collection of the rents from a subtenant, be deemed liable to the subtenant for any failure of Tenant to perform and comply with any of Tenant's obligations to such subtenant under such sublease. Tenant hereby irrevocably authorizes and directs any such subtenant, upon receipt of a written notice from Landlord stating that a Breach exists in the performance of Tenant's obligations under this Lease, to pay to Landlord the rents and other charges due and to become due under the sublease. Subtenant shall rely upon any such statement and request from Landlord and shall pay such rents and other charges to Landlord without any obligation or right to inquire as to whether such Breach exists and notwithstanding any notice from or claim from Tenant to the contrary. Tenant shall have no right or claim against said subtenant, or, until the Breach has been cured, against Landlord, for any such rents and other charges so paid by said subtenant to Landlord.

(b) In the event of a Breach by Tenant in the performance of its obligations under this Lease, Landlord, at its option and without any obligation to do so, may require any subtenant to attorn to Landlord, in which event Landlord shall undertake the obligations of the sublandlord under such sublease from the time of the exercise of said option to the expiration of such sublease; provided, however, Landlord shall not be liable for any prepaid rents or security deposit paid by such subtenant to such sublandlord or for any other prior Defaults or Breaches of such sublandlord under such sublease.

(c) Any matter or thing requiring the consent of the sublandlord under a sublease shall also require the consent of Landlord herein.

(d) No subtenant shall further assign or sublet all or any part of the Premises without Landlord's prior written consent.

(e) If Landlord delivers a copy of any notice of Default or Breach by Tenant to the subtenant, such subtenant shall have the right to cure the Default of Tenant within the grace period, if any, specified in such notice. In such event, the subtenant shall have a right of reimbursement and offset from and against Tenant for any such Defaults cured by the subtenant.

13. DEFAULT; BREACH; REMEDIES.

13.1. Default; Breach. Landlord and Tenant agree that if an attorney is consulted by Landlord in connection with a Tenant Default or Breach, $350.00 is a reasonable minimum sum per such occurrence for legal services and costs in the preparation and service of a notice of Default, and that Landlord may include the cost of such services and costs in said notice as rent due and payable to cure said Default, whether or not a legal action is subsequently commenced in connection with such Default or resulting Breach. A "Default" is defined as a failure by the Tenant to observe, comply with or perform any of the terms, covenants, conditions or rules applicable to Tenant under this Lease. A"Breach" is defined as the occurrence of any one or more of the following Defaults, and, where a grace period for cure after notice is specified herein, the failure by Tenant to cure such Default prior to the expiration of the applicable grace period, and shall entitle Landlord to pursue the remedies set forth in Paragraphs 13.2 and/or 13.3:

(a) The vacating or abandonment of the Premises.

(b) The failure by Tenant to make any payment of Base Rent or any other monetary payment required to be made by Tenant hereunder, whether to Landlord or to a third party, as and when due, the failure by Tenant to provide Landlord with reasonable evidence of insurance or surety bond required under this Lease, or the failure of Tenant to fulfill any obligation under this Lease which endangers or threatens life or property, where such failure continues for a period of three (3) days following written notice thereof by or on behalf of Landlord to Tenant.

(c) Except as expressly otherwise provided in this Lease, the failure by Tenant to provide Landlord with reasonable written evidence (in duly executed original form, if applicable) of (i) compliance with Applicable Law per Paragraph 6.3, (ii) the inspection, maintenance and service contracts required under Paragraph7, (iii) the rescission of an unauthorized assignment or subletting per Paragraph 12.l(b), (iv) a Tenancy Statement per Paragraphs 16 or 37, (v) the subordination or non-subordination of this Lease per Paragraph 30, (vi) the guaranty of the performance of Tenant's obligations under this Lease if required under Paragraph 37, (vii) the execution of any document requested under Paragraph 42 (easements), or (viii) any other documentation or information which Landlord may reasonably require of Tenant under the terms of this Lease, where any such failure continues for a period of ten (10) days following written notice by or on behalf of Landlord to Tenant.

(d) A Default by Tenant as to the terms, covenants, conditions or provisions of this Lease, or of the rules adopted under Paragraph 40 hereof, that are to be observed, complied with or performed by Tenant, other than those described in Subparagraphs 13.1 (a), (b) or (c), above, where such Default continues for a period of thirty (30) days after written notice thereof by or on behalf of Landlord to Tenant; provided, however, that if the nature of Tenant's Default is such that more than thirty (30) days are reasonably required for its cure, then it shall not be deemed to be a Breach of this Lease by Tenant if Tenant commences such cure within said thirty (30) day period and thereafter diligently prosecutes such cure to completion.

(e) The occurrence of any of the following events: (i) The making by Tenant of any general arrangement or assignment for the benefit of creditors; (ii) Tenant's becoming a ''debtor'' as defined in 11 U.S.C. §101 or any successor statute thereto (unless, in the case of a petition filed against Tenant, the same is dismissed within sixty (60) days), (iii) the appointment of a trustee or receiver to take possession of substantially all of Tenant's assets located at the Premises or of Tenant's interest in this Lease, where possession is not restored to Tenant within thirty (30) days; or (iv) the attachment, execution or other judicial seizure of substantially all of Tenant's assets located at the Premises or of Tenant's interest in this Lease, where such seizure is not discharged within thirty (30) days, provided, however, in the event that any provision of this Subparagraph 13.l(e) is contrary to any applicable law, such provision shall be of no force or effect, and shall not affect the validity of the remaining provisions.

(f) The discovery by Landlord that any financial statement given to Landlord by Tenant or any Guarantor of Tenant's obligations hereunder was materially false.

(g) If The performance of Tenant's obligations under this Lease is guaranteed; (i) the death of a guarantor, (ii) the termination of a guarantor's liability with respect to this Lease other than in accordance with the terms of such guaranty, (iii) a guarantor's becoming insolvent or the subject of a bankruptcy filing, (iv) a guarantor's refusal to honor the guaranty, or (v) a guarantor's breach of its guaranty obligation on an anticipatory breach basis, and Tenant's failure, within sixty (60) days following written notice by or on behalf of Landlord to Tenant of any such event, to provide Landlord with written alternative assurance or security, which, when coupled with the then existing resources of Tenant, equals or exceeds the combined financial resources of Tenant and the guarantors that existed at the time such guaranty was furnished. Any notice required to be given by Landlord above shall be in lieu of, and not in addition to, any notice required under Section 1161 of the Code of Civil Procedure of California or any similar, superseding statute.

13.2. Remedies. In the event of a Breach of this Lease by Tenant, as defined in Paragraph 13.1, with or without further notice or demand, and without limiting Landlord in the exercise of any right or remedy which Landlord may have by reason of such Breach, Landlord may:

(a) Terminate Tenant's right to possession of the Premises by any lawful means, in which case this Lease and the Term hereof shall terminate and Tenant shall immediately surrender possession of the Premises to Landlord. In such event Landlord shall be entitled to recover from Tenant: (i) the worth at the time of the award of the unpaid rent which had been earned at the time of termination, (ii) the worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that the Tenant proves could have been reasonably avoided, (iii) the worth at the time of award of the amount by which the unpaid rent for the balance of the Term after the time of award exceeds the amount of such rental loss that the Tenant proves could be reasonably avoided; and (iv) any other amount necessary to compensate Landlord for all the detriment proximately caused by the Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, including but not limited to the cost to recovering possession of the Premises, expenses of reletting, including necessary renovation and alteration of the Premises, reasonable attorneys' fees, all rent abated pursuant to the terms of this Lease, and that portion of the leasing commission paid by Landlord applicable to the unexpired Term of this Lease. As used in clauses (i) and (ii) above, the ''worth at the time of award'' shall be computed by allowing interest at the ''Interest Rate'' (as defined in Paragraph 19 below). As used in clause (iii) above, the ''worth at the time of award'' shall

be computed by discounting the applicable amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%). Efforts by Landlord to mitigate damages caused by Tenant's Default or Breach of this Lease shall not waive Landlord's right to recover damages under this Paragraph 13.2. If termination of this Lease is obtained through the provisional remedy of unlawful detainer, Landlord shall have the right to recover in such proceeding the unpaid rent and damages as are recoverable therein, or Landlord may reserve therein the right to recover all or any part thereof in a separate suit for such rent and/or damages. If a notice and grace period required under Subparagraphs 13.1 (b), (c) or (d) was not previously given, a notice to pay rent or quit, or to perform or quit, as the case may be, given to Tenant under any statute authorizing the forfeiture of leases for unlawful detainer shall also constitute the applicable notice for grace period purposes required by Subparagraphs 13.l(b), (c) or (d). In such case, the applicable grace period under Subparagraphs 13.l (b), (c) or (d) and under the unlawful detainer statute shall run concurrently after the one such statutory notice, and the failure of Tenant to cure the Default within the greater of the two such grace periods shall constitute both an unlawful detainer and a Breach of this Lease entitling Landlord to the remedies provided for in this Lease and/or by said statute.

(b) Continue the Lease and Tenant's right to possession in effect (under California Civil Code Section 1951.4) after Tenant's Breach and abandonment and recover the rent as it becomes due, provided Tenant has the right to sublet or assign, subject only to reasonable limitations. See Paragraphs 12 and 36 for the limitations on assignment and subletting which limitations Tenant and Landlord agree are reasonable. Acts of maintenance or preservation, efforts to relet the Premises, or the appointment of a receiver to protect the Landlord's interest under the Lease, shall not constitute a termination of the Tenant's right to possession.

(c) Pursue any other remedy now or hereafter available to Landlord under the laws or judicial decisions of the state wherein the Premises are located.

(d) The expiration of the Term or earlier termination of this Lease and/or the termination of Tenant's right to possession shall not relieve Tenant from liability under any indemnity provisions of this Lease as to matters occurring or accruing during the Term hereof or by reason of Tenant's occupancy of the Premises.

(e) If Tenant fails to perform any affirmative duty or obligation of Tenant under this Lease, within ten (10) days after written notice to Tenant (or in case of an emergency, without notice), Landlord may at its option (but without obligation to do so), perform such duty or obligation on Tenant's behalf, including but not limited to the obtaining of reasonably required bonds, insurance policies, or governmental licenses, permits or approvals. The costs and expenses of any such performance by Landlord shall be due and payable by Tenant to Landlord upon invoice therefor. If any check given to Landlord by Tenant shall not be honored by the bank upon which it is drawn, Landlord, at its option, may require all future payments to be made under this Lease by Tenant to be made only by cashier's check.

13.3. Late Charges. Tenant hereby acknowledges that late payment by Tenant to Landlord of rent and other sums due hereunder will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges, and late charges which may be imposed upon Landlord by the terms of any ground lease, mortgage or trust deed covering the Premises. Accordingly, if any installment of rent or any other sum due from Tenant shall not be received by Landlord or Landlord's designee within five (5) days after such amount shall be due, then, without any requirement for notice to Tenant, Tenant shall pay to Landlord a late charge equal to six percent (6%) of such overdue amount. The parties hereby agree that such late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of late payment by Tenant. Acceptance of such late charge by Landlord shall in no event constitute a waiver of Tenant's Default or Breach with respect to such overdue amount, nor prevent Landlord from exercising any of the other rights and remedies granted hereunder. In the event that a late charge is payable hereunder, whether or not collected, for three (3) consecutive installments of Base Rent, then notwithstanding Paragraph 4.1 or any other provision of this Lease to the contrary, Base Rent shall, at Landlord's option, become due and payable quarterly in advance.

13.4. Breach by Landlord. Landlord shall not be deemed in breach of this Lease unless Landlord fails within a reasonable time to perform an obligation required to be performed by Landlord. For purposes of this Paragraph 13.4, a reasonable time shall in no event be less than thirty (30) days after receipt by Landlord, and by the holders of any ground lease, mortgage or deed of trust covering the Premises whose name and address shall have been furnished Tenant in writing for such purpose, of written notice specifying wherein such obligation of Landlord has not been performed; provided, however, that if the nature of Landlord's obligation is such that more than thirty (30) days after such notice are reasonably required for its performance, then Landlord shall not be in breach of this Lease if performance is commenced within such thirty (30) day period and thereafter diligently pursued to completion.

14. CONDEMNATION. If the Premises or any portion thereof are taken under the power of eminent domain or sold under the threat of the exercise of said power (all of which are herein called "condemnation"), this Lease shall terminate as to the part so taken as of the date the condemning authority takes title or possession, whichever first occurs. If more than ten percent (10%) of the floor area of the Premises, or a material portion of the Common Areas, is taken by condemnation and such taking materially interferes with Tenant's use of the Premises, Tenant may, at Tenant's option, to be exercised in writing within ten (10) days after Landlord shall have given Tenant written notice of such taking (or in the absence of such notice, within ten (10) days after the condemning authority shall have taken possession) terminate this Lease as of the date the condemning authority takes such possession. If Tenant does not terminate this Lease in accordance with the foregoing, this Lease shall remain in full force and effect as to the portion of the Premises remaining, except that the Base Rent shall be reduced in the same proportion as the rentable floor area of the Premises taken bears to the total rentable floor area of the Premises prior to the taking. No reduction of Base Rent shall occur with respect to any taking of Common Areas. Any award for the taking of all or any part of the Premises under the power of eminent domain or any payment made under threat of the exercise of such power shall be the property of Landlord, whether such award shall be made as compensation for diminution in value of the leasehold or for the taking of the fee, or as severance damages; provided, however, that Tenant shall be entitled to any compensation separately awarded to Tenant for Tenant's relocation expenses and/or loss of Tenant's Trade Fixtures. In the event that this Lease is not terminated by reason of such condemnation, Landlord shall to the extent of its net severance damages received, over and above the legal and other expenses incurred by Landlord in the condemnation matter, repair any damage to the Premises caused by such condemnation, except to the extent that Tenant has been reimbursed therefor by the condemning authority. Tenant shall be responsible for the payment of any amount in excess of such net severance damages required to complete such repair.

15. BROKERS.

15.1. The Brokers named in Paragraph 1.10 (if any) are the procuring causes of this Lease.

15.2. Upon execution of this Lease by both Parties, Landlord shall pay to said Brokers jointly, or in such separate shares as they may mutually designate in writing, a fee as set forth in a separate written agreement between Landlord and said Brokers.

15.3. Landlord and Tenant each represents and warrants to the other that it has had no dealings with any person, firm, broker or finder (other than the Brokers, if any, named in Paragraph 1.10) in connection with the negotiation of this Lease and/or the consummation of the transaction contemplated hereby, and that no broker or other person, firm or entity (other than said named Brokers) is entitled to any commission or finder's fee in connection with said transaction. Landlord and Tenant do each hereby agree to indemnify, protect, defend and hold the other harmless from and against liability for compensation or charges which may be claimed by any such unnamed broker, finder or other similar party by reason of any dealings or actions of the indemnifying Party, including any costs, expenses and attorneys' fees reasonably incurred with respect thereto.

16. TENANCY STATEMENT.

16.1. Each Party (as "Responding Party") shall within ten (10) days after written notice from the other Party (the "Requesting Party") execute, acknowledge and deliver to the Requesting Party a statement in writing (a) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease as so modified is in full force and effect), and the date to which rental and other charges are paid in advance, if any, and (b) acknowledging that there are not, to the Responding Party's knowledge, any uncured defaults on the part of Landlord or Tenant, or specifying such defaults if any are claimed, plus such additional information, confirmation and/or statements as may be reasonably requested by the Requesting Party.

16.2. If Landlord desires to finance, refinance, or sell the Premises, Building and/or Project or any part thereof, Tenant and all Guarantors of Tenant's performance hereunder shall deliver to any potential lender or purchaser designated by Landlord such financial statements of Tenant and such Guarantors as may be reasonably required by such lender or purchaser, including but not limited to Tenant's financial statements for the past three (3) years. All such financial statements shall be received by Landlord and such lender or purchaser in confidence and shall be used only for the purposes herein set forth.

17. LANDLORD'S LIABILITY. The term "Landlord" as used herein shall mean the owner or owners at the time in question of the fee title to the Premises, or, if this is a sublease, of the tenant's interest in the prior lease. In the event of a transfer of Landlord's title or interest in the Premises or in this Lease, Landlord shall deliver to the transferee or assignee (in cash or by credit) any unused Security Deposit held by Landlord at the time of such transfer or assignment. Upon such transfer or assignment, the prior Landlord shall be relieved of all liability with respect to the obligations and/or covenants under this Lease thereafter to be performed by the "Landlord". The obligations and/or covenants in this Lease to be performed by the Landlord shall be binding only upon the Landlord as hereinabove defined.

18. SEVERABILITY. The invalidity of any provision of this Lease, as determined by a court of competent jurisdiction, shall in no way affect the validity of any other provision hereof.

19. INTEREST ON PAST-DUE OBLIGATIONS. Any monetary payment due Landlord hereunder not received by Landlord on the date on which it was due, shall thereafter bear interest at the rate of twelve (12%) per annum, but not exceeding the maximum rate allowed by law, in addition to the late charge provided for in Paragraph 13.3.

20. TIME OF ESSENCE. Time is of the essence with respect to the performance of all obligations to be performed or observed by the Parties under this Lease.

21. RENT DEFINED. All monetary obligations of Tenant to Landlord under the terms of this Lease are deemed to be rent.

22. NO PRIOR OR OTHER AGREEMENTS. This Lease contains all agreements between the Parties with respect to the leasing of the Premises from Landlord to Tenant, and no other prior or contemporaneous agreement or understanding shall be effective.

23. NOTICES.

23.1. All notices required or permitted by this Lease shall be in writing and may be delivered in person (by hand or by messenger or courier service) or may be sent by certified mail or U.S. Postal Service Express Mail or other reputable overnight courier service, with postage prepaid, and shall be deemed sufficiently given if served in a manner specified in this Paragraph 23. The addresses noted adjacent to Landlord's signature on this Lease shall be Landlord's address for delivery or mailing of notice purposes, unless Landlord by written notice to Tenant, specifies a different address for notice purposes. The Premises shall constitute Tenant's address for the purpose of mailing or delivering notices to Tenant. A copy of all notices required or permitted to be given to Landlord hereunder shall be concurrently transmitted to such party or parties at such addresses as Landlord may from time to time hereafter designate by written notice to Tenant.

23.2. Any notice sent by certified mail, return receipt requested, postage prepaid, shall be deemed given on the date of delivery shown on the receipt card, or if no delivery date is shown, the postmark thereon. Notices delivered by United States Express Mail or overnight courier that guarantees next day delivery shall be deemed given twenty-four (24) hours after delivery of the same to the United States Postal Service or courier. If notice is received on a Sunday or legal holiday, it shall be deemed received on the next business day.

24. WAIVERS. No waiver by Landlord of the Default or Breach of any term, covenant or condition hereof by Tenant, shall be deemed a waiver of any other term, covenant or condition hereof, or of any subsequent Default or Breach by Tenant of the same or of any other term, covenant or condition hereof. Landlord's consent to, or approval of, any act shall not be deemed to render unnecessary the obtaining of Landlord's consent to, or approval of, any subsequent or similar act by Tenant, or be construed as the basis of an estoppel to enforce the provision or provisions of this Lease requiring such consent. Regardless of Landlord's knowledge of a Default or Breach at the time of accepting rent, the acceptance of rent by Landlord shall not be a waiver of any preceding Default or Breach by Tenant of any provision hereof, other than the failure of Tenant to pay the particular rent so accepted. Any payment given Landlord by Tenant may be accepted by Landlord on account of moneys or damages due Landlord, notwithstanding any qualifying statements or conditions made by Tenant in connection therewith, which such statements and/or conditions shall be of no force or effect whatsoever.

25. RECORDING. Neither this Lease nor any memorandum hereof shall be recorded by either Landlord or Tenant.

26. **NO RIGHT TO HOLDOVER.** Tenant has no right to retain possession of the Premises or any part thereof beyond the expiration or earlier termination of this Lease. Any holding over by Tenant after the expiration or earlier termination of this Lease shall be construed to be a tenancy at sufferance on all of the terms and conditions set forth herein to the extent not inconsistent with a tenancy at sufferance, provided that the Base Rent for such holdover period shall be an amount equal to two (2) times the monthly Base Rent due for the last full month of the Term. Acceptance by Landlord of rent or any other sum payable hereunder after such expiration or earlier termination shall not result in an extension or renewal of this Lease. If Tenant fails to surrender the Premises upon the expiration or earlier termination of this Lease, Tenant shall indemnify, defend and hold harmless Landlord from and against all loss, damage, cost, liability or expense (including, without limitation, attorneys' fees and expenses) resulting from or relating to such failure to surrender the Premises including, without limitation, any claim made by any succeeding tenant.

27. **CUMULATIVE REMEDIES.** No remedy or election of Landlord hereunder shall be deemed exclusive but shall, wherever possible, be cumulative with all other remedies at law or in equity.

28. **COVENANTS AND CONDITIONS.** All provisions of this Lease to be observed or performed by Tenant are both covenants and conditions.

29. **BINDING EFFECT; CHOICE OF LAW.** Except as otherwise provided herein, this Lease shall be binding upon the parties, their personal representatives, successors and assigns and be governed by the laws of the State in which the Premises are located, without regard to any choice of law or conflict of law provisions thereof. Any litigation between the Parties hereto concerning this Lease shall be initiated in the county in which the Premises are located.

30. **SUBORDINATION; ATTORNMENT.**

30.1. **Subordination.** This Lease and Tenant's rights hereunder shall be subject and subordinate to any ground lease, mortgage, deed of trust, or other hypothecation or security device (collectively, "Security Device"), now or hereafter placed by Landlord upon the real property of which the Premises are a part, to any and all advances made on the security thereof, and to all renewals, modifications, consolidations, replacements and extensions thereof. Tenant agrees that the Lenders holding any such Security Device shall have no duty, liability or obligation to perform any of the obligations of Landlord under this Lease, but that in the event of Landlord's default with respect to any such obligation, Tenant will give any Lender whose name and address have been furnished Tenant in writing for such purpose notice of Landlord's default and allow such Lender thirty (30) days (or if more than thirty (30) days is required to effect such cure, such additional time as may be necessary) following receipt of such notice for the cure of said default before invoking any remedies Tenant may have by reason thereof. If any Lender shall elect to have this Lease and/or Tenant's rights hereunder superior to the lien of its Security Device and shall give written notice thereof to Tenant, this Lease and such rights shall be deemed prior to such Security Device, notwithstanding the relative dates of the documentation or recordation thereof.

30.2. **Attornment.** Notwithstanding any such subordination, and at the election of a Lender or any other party who acquires ownership of the Premises by reason of a foreclosure of a Security Device, Tenant agrees to attorn to such Lender or other party, and in the event of such foreclosure and such election, such new owner shall not: (i) be liable for any act or omission of any prior lessor or with respect to events occurring prior to acquisition of ownership, (ii) be subject to any offsets or defenses which Tenant might have against any prior lessor, or (iii) be bound by prepayment of more than one month's rent.

30.3. **Self-Executing.** The agreements contained in this Paragraph 30 shall be effective without the execution of any further documents and shall survive the foreclosure of a Security Device; provided, however, that, upon written request from Landlord or a Lender, Tenant and Landlord shall execute such further writings as may be reasonably required to separately document any of the matters provided for herein.

31. ATTORNEYS' FEES. If any Party brings an action or proceeding to enforce the terms hereof or declare rights hereunder, the Prevailing Party (as hereafter defined) in any such proceeding, action, or appeal thereon, shall be entitled to reasonable attorneys' fees. Such fees may be awarded in the same suit or recovered in a separate suit, whether or not such action or proceeding is pursued to decision or judgment. The term "Prevailing Party" shall include, without limitation, a Party who substantially obtains or defeats the relief sought, as the case may be, whether by compromise, settlement, judgment, or the abandonment by the other Party of its claim or defense. The attorneys' fee award shall not be computed in accordance with any court fee schedule, but shall be such as to fully reimburse all attorneys' fees reasonably incurred. In addition to the foregoing award of attorneys' fees to the Prevailing Party, the Prevailing Party shall be entitled to its attorneys' fees incurred in any post-judgment proceedings to collect or enforce the judgment. This provision is separate and several and shall survive the merger of this Lease into any judgment on this Lease. Landlord shall be entitled to attorneys' fees, costs and expenses incurred in the preparation and service of notices of Default and consultations in connection therewith, whether or not a legal action is subsequently commenced in connection with such Default or resulting Breach.

32. LANDLORD'S ACCESS; SHOWING PREMISES; REPAIRS. Landlord and Landlord's agents shall have the right to enter the Premises at any time, in the case of an emergency, and otherwise at reasonable times for the purpose of inspection, showing the same to prospective purchasers, lenders, or lessees, and making such alterations, repairs, improvements or additions to the Premises or to the building of which they are a part, as Landlord may reasonably deem necessary. Landlord may at any time place on or about the Premises or building any ordinary "For Sale" signs and Landlord may at any time during the last one hundred twenty (120) days of the Term hereof place on or about the Premises any ordinary "For Lease" signs. All such activities of Landlord shall be without abatement of rent or liability to Tenant.

33. AUCTIONS. Tenant shall not conduct, nor permit to be conducted, either voluntarily or involuntarily, any auction upon the Premises without first having obtained Landlord's prior written consent. Notwithstanding anything to the contrary in this Lease, Landlord shall not be obligated to exercise any standard of reasonableness in determining whether to grant such consent.

34. SIGNS.

(a) Tenant shall not be permitted to place or maintain any signs upon the Premises or Project, other than Building-standard Tenant identification signage upon the Premises entrance, at Landlord's sole cost and expense, and upon the Building directory board in the ground floor Building lobby, both of which shall be subject to Landlord's reasonable approval.

(b) Notwithstanding the foregoing, but subject to Landlord's prior reasonable approval, the sign criteria for the Building, all covenants, conditions, and restrictions affecting the Project, all applicable laws, rules, regulations, and local ordinances, and Tenant obtaining all necessary permits and approvals from the City of El Monte, Tenant shall also have the non-exclusive right, at Tenant's sole cost and expense, to have Tenant's name placed (l) in one location at the top level of the Building ("Building Sign"), but not affixed to the Building glass, in a manner mutually agreed upon by Landlord and Tenant, and (2) on the monument sign currently located at the base main entrance ("Monument Sign"). The location of Tenant's name on the Monument Sign will be determined by Landlord. Tenant shall be solely responsible for all costs and expenses arising from the Building Sign and Tenant's panel on the Monument Sign, including, without limitation, all design, fabrication and permitting costs, license fees, installation, maintenance, repair, and removal costs. Tenant shall reimburse Landlord on demand for all such costs paid or incurred by Landlord.

(c) Landlord shall maintain and repair all of Tenant's signs at Tenant's expense. Upon the expiration or earlier termination of this Lease, Landlord shall, at Tenant's sole cost and expense (except as otherwise set forth hereinabove), (i) cause all of Tenant's signs to be removed from the exterior and interior of the Building and the Common Areas, (ii) repair any damage caused by the removal of Tenant's signs, and (iii) restore the underlying surfaces to the condition existing prior to the installation of Tenant's signs.

35. TERMINATION; MERGER. The voluntary or other surrender of this Lease by Tenant, the mutual termination or cancellation hereof, or a termination hereof by Landlord for Breach by Tenant, shall automatically terminate any sublease or lesser estate in the Premises; provided, however, Landlord shall, in the event of any such surrender, termination or cancellation, have the option to continue any one or all of any existing subtenancies. Landlord's failure within ten (10) days following any such event to make a written election to the contrary by written notice to the holder of any such lesser interest, shall constitute Landlord's election to have such event constitute the termination of such interest.

36. CONSENTS.

(a) Except for Paragraph 33 hereof (Auctions) or as otherwise provided herein, wherever in this Lease the consent of a Party is required to an act by or for the other Party, such consent shall not be unreasonably withheld or delayed. Landlord's actual reasonable costs and expenses (including but not limited to architects', attorneys', engineers' or other consultants' fees) incurred in the consideration of, or response to, a request by Tenant for any Landlord consent pertaining to this Lease or the Premises, including but not limited to consents to an assignment, a subletting or the presence or use of a Hazardous Substance or storage tank, shall be paid by Tenant to Landlord upon receipt of an invoice and supporting documentation therefor. Subject to Paragraph 12.2(e) (applicable to assignment or subletting), Landlord may, as a condition to considering any such request by Tenant, require that Tenant deposit with Landlord an amount of money (in addition to the Security Deposit held under Paragraph 5) reasonably calculated by Landlord to represent the cost Landlord will incur in considering and responding to Tenant's request. Except as otherwise provided, any unused portion of said deposit shall be refunded to Tenant without interest. Landlord's consent to any act, assignment of this Lease or subletting of the Premises by Tenant shall not constitute an acknowledgment that no Default or Breach by Tenant of this Lease exists, nor shall such consent be deemed a waiver of any then existing Default or Breach.

(b) All conditions to Landlord's consent authorized by this Lease are acknowledged by Tenant as being reasonable. The failure to specify herein any particular condition to Landlord's consent shall not preclude the imposition by Landlord at the time of consent of such further or other conditions as are then reasonable with reference to the particular matter for which consent is being given.

37. GUARANTOR.

37.1. If there are to be any Guarantors of this Lease, each such Guarantor shall execute the Landlord's then current form of Guaranty, and each said Guarantor shall have the same obligations as Tenant under this Lease, including but not limited to the obligation to provide the Tenancy Statement and information called for by Paragraph 16.

37.2. It shall constitute a Default of the Tenant under this Lease if any such Guarantor fails or refuses, upon reasonable request by Landlord to give: (a) evidence of the due execution of the guaranty called for by this Lease, including the authority of the Guarantor (and of the party signing on Guarantor's behalf to obligate such Guarantor on said guaranty, and including in the case of a corporate Guarantor, a certified copy of a resolution of its board of directors authorizing the making of such guaranty, together with a certificate of incumbency showing the signatures of the persons authorized to sign on its behalf, (b) current financial statements of Guarantor as may from time to time be requested by Landlord, (c) a Tenancy Statement, or (d) written confirmation that the guaranty is still in effect.

38. QUIET POSSESSION. Upon payment by Tenant of the rent for the Premises and the observance and performance of all of the covenants, conditions and provisions on Tenant's part to be observed and performed under this Lease, Tenant shall have quiet possession of the Premises for the entire term hereof subject to all of the provisions of this Lease and all matters of record against the Premises.

39. OPTIONS.

39.1. Definition. As used in this Paragraph 39 the word "Option" has the following meaning: (a) the right to extend the Term of this Lease or to renew this Lease or to extend or renew any lease that Tenant has on other property of Landlord; (b) the right of first refusal to lease the Premises or the right of first offer to lease the Premises or the right of first refusal to lease other property of Landlord or the right of first offer to lease other property of Landlord; and (c) the right to purchase the Premises, or the right of first refusal to purchase the Premises, or the right of first offer to purchase the Premises, or the right to purchase other property of Landlord, or the right of first refusal to purchase other property of Landlord, or the right of first offer to purchase other property of Landlord.

39.2. Options Personal To Original Tenant. Each Option granted to Tenant in this Lease is personal to the original Tenant named in Paragraph 1.1 here of, and cannot be voluntarily or involuntarily assigned or exercised by any person or entity other than said original Tenant while the original Tenant is in full and actual possession of the Premises and without the intention of thereafter assigning or subletting. The Options, if any, herein granted to Tenant are not assignable, either as a part of an assignment of this Lease or separately or apart therefrom, and no Option may be separated from this Lease in any manner, by reservation or otherwise.

39.3. Multiple Options. In the event that Tenant has any multiple Options to extend or renew this Lease, a later option cannot be exercised unless the prior Options to extend or renew this Lease have been validly exercised.

39.4. Effect of Default.

(a) Tenant shall have no right to exercise an Option, notwithstanding any provision in the grant of Option to the contrary: (i) during the period commencing with the giving of any notice of Default under Paragraph 13.1 and continuing until the noticed Default is cured, or (ii) during the period of time any monetary obligation due Landlord from Tenant is unpaid (without regard to whether notice thereof is given Tenant), or (iii) during the time Tenant is in Breach of this Lease, or (iv) in the event that Landlord has given to Tenant three (3) or more notices of Default under Paragraph 13.1, whether or not the Defaults are cured, during the twelve (12) month period immediately preceding the exercise of the Option.

(b) The period of time within which an Option may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise an Option because of the provisions of Paragraph 39.4(a).

(c) All rights of Tenant under the provisions of an Option shall, at Landlord's option, terminate and be of no further force or effect, notwithstanding Tenant's due and timely exercise of the Option, if, after such exercise and during the Term of this Lease, (i) Tenant fails to pay to Landlord a monetary obligation of Tenant for a period of thirty (30) days after such obligation becomes due (without any necessity of Landlord to give notice thereof to Tenant), or (ii) Landlord gives to Tenant three (3) or more notices of Default under Paragraph 13.1 during any twelve (12) month period, whether or not the Defaults are cured, or (iii) if Tenant commits a Breach of this Lease.

40. RULES AND REGULATIONS. Tenant agrees that it will abide by, keep and observe all reasonable rules and regulations which Landlord may make from time to time for the management, safety, care, and cleanliness of the grounds, the parking and unloading of vehicles and the preservation of good order within the Project, as well as for the convenience of occupants or tenants of the Project and their invitees. The current rules and regulations for the Project are attached to this Lease as Exhibit B and incorporated herein by this reference.

41. SECURITY MEASURES. Tenant hereby acknowledges that the rental payable to Landlord hereunder does not include the cost of guard service or other security measures, and that Landlord shall have no obligation whatsoever to provide same (provided that Landlord has the right, in its sole and absolute discretion, to provide security services and include the cost thereof as an item of Common Area Expenses). Tenant assumes all responsibility for the protection of the Premises, Tenant, its agents and invitees and their property from the acts of third parties.

42. RESERVATIONS. Landlord reserves to itself the right, from time to time, to grant, without the consent or joinder of Tenant, such easements, rights and dedications that Landlord deems necessary, and to cause the recordation of parcel maps and restrictions, so long as such easements, rights, dedications, maps and restrictions do not unreasonably interfere with the use of the Premises by Tenant. Tenant agrees to sign any documents reasonably requested by Landlord to effectuate any such easement rights, dedication, map or restrictions.

43. PERFORMANCE UNDER PROTEST. If at any time a dispute shall arise as to any amount or sum of money to be paid by one Party to the other under the provisions hereof, the Party against whom the obligation to pay the money is asserted shall have the right to make payment "under protest" and such payment shall not be regarded as a voluntary payment and there shall survive the right on the part of said Party to institute suit for recovery of such sum. If it shall be adjudged that there was no legal obligation on the part of said Party to pay such sum or any part thereof, said Party shall be entitled to recover such sum or so much thereof as it was not legally required to pay under the provisions of this Lease.

44. AUTHORITY. If either Party hereto is a corporation, trust, or general or limited partnership, each individual executing this Lease on behalf of such entity represents and warrants that he or she is duly authorized to execute and deliver this Lease on its behalf. If Tenant is a corporation, trust or partnership, Tenant shall, within thirty (30) days after request by Landlord, deliver to Landlord evidence satisfactory to Landlord of such authority.

45. OFFER. Preparation of this Lease by Landlord or Landlord's agent and submission of same to Tenant shall not be deemed an offer to lease to Tenant. This Lease is not intended to be binding until executed by the Parties.

46. **AMENDMENTS.** This Lease may be modified only in writing, signed by the Parties in interest at the time of the modification. Tenant agrees to make such reasonable modifications to this Lease as may be reasonably required by a Lender in connection with the obtaining of financing or refinancing of the property of which the Premises are a part.

47. **MULTIPLE PARTIES.** Except as otherwise expressly provided herein, if more than one person or entity is named herein as either Landlord or Tenant, the obligations of such multiple Parties shall be the joint and several responsibility of all persons or entities named herein as such Landlord or Tenant.

48. **NON-DISCRIMINATION.** Tenant herein covenants by and for itself, its heirs, executors, administrators and assigns, and all persons claiming under or through it, and this Lease is made and accepted upon and subject to the following conditions: That there shall be no discrimination against or segregation of any person or group of persons on account of race, color, creed, religion, national origin, ancestry, sex, handicaps, age or marital status in the leasing, subleasing, transferring, use or enjoyment of the Premises nor shall the lessee itself, or any person claiming under or through him, establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, sublessees, subtenants or vendees in the Premises.

49. **ERISA.** Neither Tenant or any of its affiliates, partners or fiduciaries in respect to the Lease (collectively, the "Tenant Group") is a Disqualified Person under Section 4975(e) of the Internal Revenue Code (the "Code") or a Party in Interest within the meaning of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), with respect to Landlord, the Construction Laborers Pension Trust for Southern California or any investor in either of the foregoing disclosed to Tenant during the term of this Lease (collectively, the "Landlord Group"), and the Tenant Group shall not enter into any subleases or other agreements respecting the Premises with any party which is a Disqualified Person as defined in the Code or a Party in Interest within the meaning of ERISA, with respect to the Landlord Group. Following the date hereof and thereafter, as reasonably required during the term of the Lease, Tenant shall furnish Landlord with all such certifications of the Tenant Group or other information which Landlord reasonably requests in order to insure compliance with the Code and ERISA. Without limiting the foregoing, Tenant acknowledges that ERISA prohibits the lease, directly or indirectly, of any property between a pension plan and a Party in Interest or a Disqualified Person as to that plan, as such terms are defined in ERISA and the Code, respectively.

50. **EXCULPATION.** It is expressly understood and agreed that notwithstanding anything in this Lease to the contrary, and notwithstanding any Applicable Law to the contrary, the liability of Landlord hereunder (including any successor to Landlord) and any recourse by Tenant against Landlord shall be limited solely and exclusively to the equity interest of Landlord in and to the Premises, Landlord shall not have any personal liability therefor, and Tenant hereby expressly waives and releases such personal liability on behalf of itself and all persons claiming by, through or under Tenant. If this Lease is being executed by TDA on behalf of Landlord, no present or future officer, director, employee, trustee, member, investment manager or agent of TDA shall have any personal liability, directly or indirectly, and recourse shall not be had against any such officer, director, employee, trustee, member, investment manager or agent under or in connection with this Lease or any other document or instrument heretofore or hereafter executed in connection with this Lease. Tenant hereby waives and releases any and all such personal liability and recourse. The limitations of liability provided in this Paragraph 50 are in addition to, and not in limitation of, any limitation on liability applicable to Landlord provided by law or in any other contract, agreement or instrument.

51. **INTERPRETATION.** The language in all parts of this Lease shall be in all cases construed as a whole according to its fair meaning and not strictly for nor against either Landlord or Tenant.

52. **OPTION TO EXTEND.**

52.1. **Grant of Option to Extend.** Subject to the provisions of Paragraph 39 above, Landlord hereby grants to Tenant the option to extend (the "Option to Extend") the Term of the Lease for an additional term of thirtysix (36) months (the "Option Term"), on the same terms and conditions as set forth in the Lease as in effect immediately prior to the expiration of the Term, except that Base Rent during the Option Term shall be the amount(s) set forth below. The Option to Extend shall be exercised only by written notice (the "Extension Notice") delivered to Landlord not more than nine (9) months but not less than six (6) months before the expiration of the Term. If Tenant fails to deliver to Landlord written notice of the exercise of the Option to Extend within the time period prescribed above, the Option to Extend shall lapse and there shall be no further right to extend the Term of the Lease. If Tenant properly exercises the Option to Extend, all references in this Lease to the "Term" of this Lease shall mean the initial Term of this Lease as extended by the Option Term, as applicable.

52.2. Base Rent During Option Term. Base Rent shall be adjusted as of the commencement of the Option Term (the "Option Term Commencement Date") to equal one hundred percent (100%) of the then "Fair Market Rental Value" of the Premises determined in the following manner: Within thirty (30) days following Tenant's exercise of the Option to Extend, Landlord and Tenant shall meet in an effort to negotiate in good faith the Fair Market Rental Value of the Premises as of the Option Term Commencement Date. If Landlord and Tenant have not agreed upon the Fair Market Rental Value of the Premises within ten (10) days of the first meeting, the Fair Market Rental Value shall be determined by the following appraisal method:

(a) If Landlord and Tenant are not able to agree upon the Fair Market Rental Value of the Premises within the time period prescribed above, then Landlord and Tenant shall attempt to agree in good faith upon a single licensed commercial real estate agent with at least seven (7) years full-time experience as a real estate agent active in leasing of commercial office buildings in the area of the Premises not later than five (5) months prior to the Option Term Commencement Date. If Landlord and Tenant are unable to agree upon a single agent within such time period, then within fifteen (15) days thereafter, Landlord and Tenant shall each appoint a licensed commercial real estate agent with at least seven (7) years full-time experience as a real estate agent active in leasing of commercial office buildings in the area of the Premises and give notice to the other of such appointment. Within ten (10) days thereafter, the two appointed agents shall appoint a third agent meeting the same qualifications. If either Landlord or Tenant fails to appoint its agent and to give written notice thereof to the other party within the prescribed time period, the single agent appointed shall determine the Fair Market Rental Value of the Premises. If both parties fails to appoint agents within the prescribed time periods, then an agent meeting the qualifications stated above shall be selected by the President of the Los Angeles County Realtors Association upon application by either party, which agent shall determine the Fair Market Rental Value of the Premises. Each party shall bear the costs of its own agent and the parties shall share equally the cost of the single or third agent if applicable.

(b) For the purpose of such appraisal, the term "Fair Market Rental Value" shall mean the price that a ready and willing tenant would pay, as of the Option Term Commencement Date, as monthly base rent, to a ready and willing landlord of property comparable to the Premises if such property were exposed for lease on the open market for a reasonable period of time and taking into account all of the purposes for which such property may be used. Such determination of Fair Market Rental Value shall be based upon the rental of space of comparable age, construction, size and location as the Premises with the improvements then existing in the Premises for a term equal to the Option Term (including, without limitation, consideration of such rental increases as may be appropriate during such period). If a single agent is chosen, then such agent shall be determined the Fair Market Rental Value of the Premises. Otherwise, the Fair Market Rental Value of the Premises shall be the arithmetic average of the three appraisals, provided that any appraisal which is more than ten percent (10%) above or below the middle appraisal shall be disregarded. Landlord and Tenant shall instruct the agent(s) to complete their determination of Fair Market Rental Value not later than sixty (60) days prior to the Option Term Commencement Date. If the Fair Market Rental Value is not determined prior to the Option Term Commencement Date, then Tenant shall continue to pay to Landlord the monthly Base Rent applicable to the Premises immediately prior to the Option Term Commencement Date until the Fair Market Rental Value is determined. When the Fair Market Rental Value is determined, Landlord shall deliver notice thereof to Tenant, and Tenant shall pay to Landlord within ten (10) days after receipt of such notice, the difference between the monthly Base Rent actually paid by Tenant to Landlord for the period from and after the Option Term Commencement Date and the new monthly Base Rent determined hereunder effective as of the Option Term Commencement Date. Notwithstanding anything to the contrary contained herein, in no event shall monthly Base Rent be reduced below the monthly Base Rent applicable to the Premises immediately prior to the Option Term Commencement Date.

53. LANDLORD'S WORK.

(a) Landlord at Landlord's sole cost and expense shall perform "Landlord's Work" (as defined herein) pursuant to the terms of this Paragraph 53. For purposes of this Lease, "Landlord's Work" shall mean the alteration of the Premises in accordance with the mutually agreed to space plan dated _____, 2018 (the "Plans"); provided, however, in no event shall Landlord be responsible for any cost of Landlord's Work that exceeds $340,400.00 (the "Allowance"). Landlord's Work shall be performed using building-standard methods, materials and finishes. Prior to the commencement of Landlord's Work, Landlord will submit to Tenant a written estimate of the cost (the "Work Cost Estimate"). Tenant will either approve the Work Cost Estimate or disapprove specific items and submit to Landlord revisions to the Plans. Upon Tenant's approval of the Work Cost Estimate, if the total costs reflected in the Work Cost Estimate exceed the Allowance, Tenant agrees to pay such excess, as Additional Rent, within five (5) business days after Tenant's approval of the Work Cost Estimate. Landlord shall not be responsible for any other work or improvements to the Premises (including, without limitation, phone and data network installation) beyond the Landlord's Work and the Allowance set forth in this Paragraph 53. The term "substantial completion" of Landlord's Work, as used in this Lease, shall mean the date Landlord notifies Tenant in writing that the Landlord's Work is substantially completed in accordance with the Plans.

(b) Tenant hereby acknowledges and agrees that Landlord will complete the Landlord's Work in the Premises while Tenant is in possession of the Premises and paying Rent under this Lease, and that completing the Landlord's Work will require Landlord to access the Premises. Tenant agrees to reasonably cooperate with Landlord and to make the Premises reasonably available to Landlord and its contractors for the performance of Landlord's Work. Tenant shall also reasonably relocate its personal property and equipment within the Premises to accommodate the performance of Landlord's Work. Tenant acknowledges that some interruptions and/or interference with Tenant's business may occur during the course of the completion of Landlord's Work, but agrees that no interruptions or inconveniences to Tenant or its business suffered as a result of Landlord's completion of Landlord's Work shall constitute an eviction of Tenant from the Premises, whether constructive or otherwise, and Tenant shall in no event be excused from paying the Rent that it is scheduled to pay pursuant to the terms of this Lease.

LANDLORD AND TENANT HAVE CAREFULLY READ AND REVIEWED THIS LEASE AND EACH TERM AND PROVISION CONTAINED HEREIN, AND BY THE EXECUTION OF THIS LEASE SHOW THEIR INFORMED AND VOLUNTARY CONSENT THERETO. THE PARTIES HEREBY AGREE THAT, AT THE TIME THIS LEASE IS EXECUTED, THE TERMS OF THIS LEASE ARE COMMERCIALLY REASONABLE AND EFFECTUATE THE INTENT AND PURPOSE OF LANDLORD AND TENANT WITH RESPECT TO THE PREMISES.

The parties here to have executed this Lease as of the date first written above.

LANDLORD:

4401 SANTA ANITA CORPORATION,
a California corporation

By: /s/ Garry Spanner
Print Name: Garry Spanner
Its: President

Address: c/o TDA, Inc.
2025 Pioneer Court
San Mateo, CA 94403
Attn: Mr. Garry Spanner
Telephone No. (650) 343-6333
Fax No. (650) 343-0858

TENANT:

FULGENT GENETICS, INC.,
a Delaware corporation

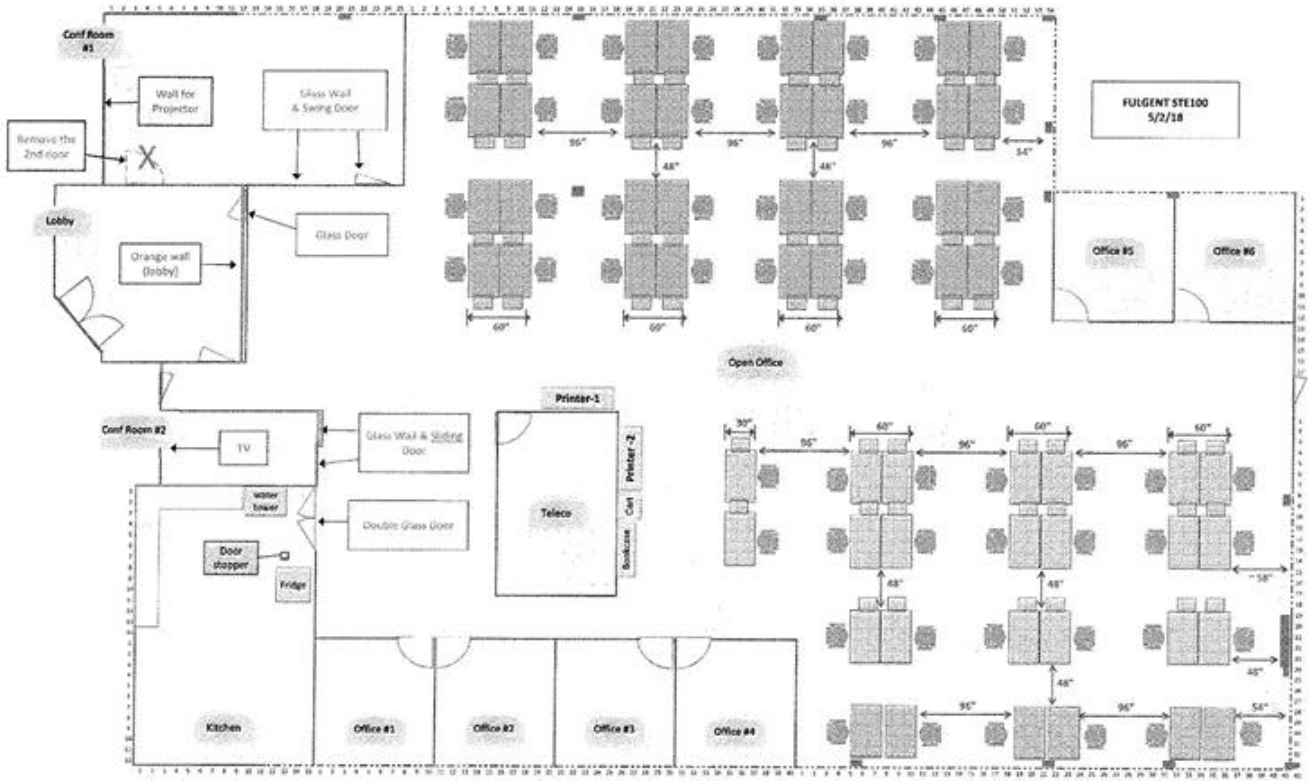
By: /s/ James Xie
Print Name: James Xie
Its: COO
By:
Print Name:
Its:

Address: 4978 Santa Anita Avenue
Temple City, CA 91780
Telephone No. (626) 350-0537
Fax No. (626) 434-1667

EXHIBIT A

FLOOR PLAN OF PREMISES

(see attached)


Conf Room #1
Wall for Projector
Glass Wall & Swing Door
Remove the 2nd door
Lobby
Orange wall (lobby)
Glass Door
FULGENT STE100
5/2/18
Office #5
Office #6
Open Office
Printer-1
Printer-2
Conf Room #2
TV
Glass Wall & Sliding Door
Water Tower
Double Glass Door
Door stopper
Fridge
Teleco
Cart
Bookcase
Kitchen
Office #1
Office #2
Office #3
Office #4

5/2/2018 Request Summary_STE100

Lobby: One orange wall

Conference Room #1:
1. Remove the 2nd door
2. Wall section beyond the lobby area change to glass wall, please.
3. Projector (power/cable on the ceiling)

Conferene Room #2:
1. Sliding door
2. TV (power and hanging rack on the wall)

Kitchen:
1. Dishwasher model: ASKO model DS426XLS
http://www.askona.com/dishwashers/built-in/d5426xls
2. Cabinet design: please see illustration below

Wall Cabinet #1:
- Shelving space for 1 microwave
- Shelving space for 1 toast oven (side by side)

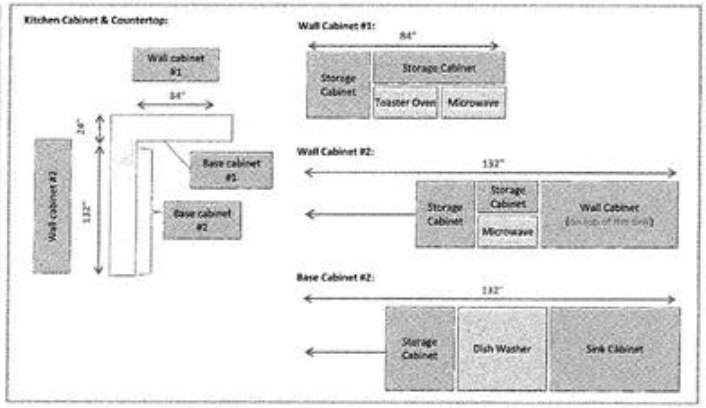
Wall Cabinet #2:
- Shelving space for 2nd microwave

Base Cabinet #1:
- Standard cabinet storage

Base Cabinet #2:
- Dish Washer (same model as we have in Ste110)

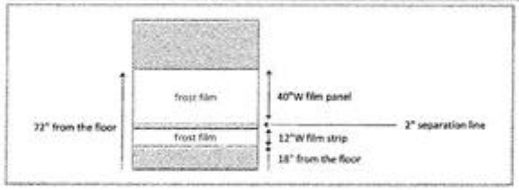
Countertop Appliances:
Short arm:
- Coffee machine (X2)
- Electric kettle (X1)

Long arm:
- Slice toaster (X1) ➔ **Left side of the sink**



Glass Door & Wall:

Location	Door type	Glass Wall	Description
Lobby to office	Swinging door		1. Frosted in the middle (including a 12" wide strip from the bottom separated from the top panel, see illustration below) 2. Wall and door design please see attached picture and email
Conference Room-1	Swinging door	Glass wall (~10 ft long)	
Conference Room-2	Sliding door	Glass wall (~4 ft long)	
Breakroom	Swinging double door		



Power Conduit: Please do not install power conduit on the floor (like what we have along the window in STE110).

EXHIBIT B

RULES AND REGULATIONS

1. Except as otherwise provided in the Lease or any exhibits thereto, no sign, placard, picture, advertisement, name or notice shall be inscribed, displayed or printed or affixed on or to any part of the outside or inside of the Building without the prior written consent of Landlord. Landlord shall have the right to remove any such sign, placard, picture, advertisement, name or notice, unless Landlord has given written consent, without notice to and at the expense of Tenant. Landlord shall not be liable in damages for such removal unless the written consent of Landlord had been obtained. All approved signs or lettering on doors and walls to the Premises shall be printed, painted, affixed or inscribed at the expense of Tenant by Landlord or by a person approved by Landlord in a manner and style acceptable to Landlord. Tenant shall not use any blinds, shades, awnings, or screens in connection with any window or door of the Premises unless approved in writing by Landlord. Tenant shall use the Building standard window covering specified by Landlord and Landlord reserves the right to disapprove interior improvements visible from the ground level outside the Building on wholly aesthetic grounds. Such improvements must be submitted for Landlord's written approval prior to installation, or Landlord may remove or replace such items at Tenant's expense. The windows and doors that reflect or admit light and air into the halls, passageways or other public places in the Project shall not be covered or obstructed by any tenant. No bottles, parcels or other articles shall be placed on the windowsills.

2. Except as otherwise provided in the Lease or any exhibits thereto, Tenant shall not obtain for use upon the Premises, food, milk, soft drinks, bottled water, plant maintenance or any other services, except from persons authorized by Landlord and at the hours and under regulations fixed by Landlord. No vending machines or machines of any description shall be installed, maintained or operated upon the Premises without the prior written consent of Landlord.

3. The bulletin board or directory of the Building shall be provided exclusively for the display of the name and location of tenants only and Landlord reserves the right to exclude any other names therefrom and otherwise limit the number of listings thereon.

4. The sidewalks, halls, passages, exits, entrances, elevators and stairways shall not be obstructed by any tenants nor used by them for any purpose other than for ingress to and egress from their respective premises. The halls, passages, exits, entrances, elevators, stairways, balconies and roof are not for the use of the general public and Landlord shall in all cases retain the right to control and prevent access thereto by all persons whose presence, in the judgment of Landlord, shall be prejudicial to the safety, character, reputation and interests of the Project and its tenants, provided that nothing herein contained shall be construed to prevent such access to persons with whom Tenant normally deals in the ordinary course of Tenant's business unless such persons are engaged in illegal activities. No tenant and no employees or invitees of any tenant shall go upon the roof of the Building; provided, that (i) Tenant's contractors who have been reasonably approved by Landlord and (ii) Tenant's personnel may access the roof of the Building as reasonably necessary in connection with Tenant's business operations at the Premises, with Tenant being jointly and severally liable for the actions of such personnel and/or contractors.

5. Tenant, upon the termination of its tenancy, shall deliver to Landlord the parking and security access cards issued to Tenant and all keys of offices, rooms and toilet rooms which shall have been furnished to Tenant or which Tenant shall have made, and in the event of loss of any access cards or keys so furnished, shall pay Landlord therefor. Tenant shall not alter any lock or install any new or additional locks or any bolts on any door of the Premises without the written consent of Landlord.

6. The toilet rooms, toilets, urinals, wash bowls and other apparatus shall not be used for any purpose other than that for which they were constructed and no foreign substance of any kind whatsoever shall be thrown therein, and the expense of any breakage, stoppage, or damage resulting from the violation of this rule shall be borne by the tenant who, or whose employees or invitees, shall have caused it.

7. Tenant shall not use the Premises in any manner which exceeds the floor load capacity of the floor on which the Premises are located or mark, drive nails, screw or drill into the partitions, woodwork or plaster or in any way deface the Premises or any part thereof.

8. No furniture, packages, supplies, merchandise, freight or equipment which cannot be hand carried shall be brought into the Building without the consent of Landlord. All moving of the same into or out of the Building shall be via the Building's freight handling facilities, unless otherwise directed by Landlord, at such time and in such manner as Landlord shall prescribe. No hand trucks or vehicles (other than a wheelchair for an individual) shall be used in passenger elevators. Any hand trucks permitted in the Building must be equipped with soft rubber tires and side guards.

9. Landlord shall have the right to prescribe the weight, size and position of all safes and other heavy equipment brought into the Building and also the times and manner of moving the same in and out of the Building. Safes or other heavy objects shall, if considered necessary by Landlord, stand on a platform of such thickness as is necessary to properly distribute the weight. Landlord will not be responsible for loss of or damage to any such safe or property from any cause, and all damage done to the Building by moving or maintaining any such safe or other property shall be repaired at the expense of Tenant. Tenant's business machines and mechanical equipment shall be installed, maintained and used so as to minimize vibration and noise that may be transmitted to the Building structure or beyond the Premises.

10. Tenant shall not use the Premises in any manner which would injure or unreasonably annoy, or obstruct or interfere with the rights of, other tenants or occupants of the Building.

11. Tenant shall not employ any person or persons other than the janitor of Landlord for the purpose of cleaning the Premises unless otherwise agreed to by Landlord; provided, that (i) Tenant's contractors who have been reasonably approved by Landlord and (ii) Tenant's personnel may maintain the Premises, with Tenant being jointly and severally liable for the actions of such personnel and/or contractors. Except with the prior written consent of Landlord, no person or persons other than those approved by Landlord shall be permitted to enter the Building for the purpose of cleaning the same. Tenant shall not cause any unnecessary labor by reason of Tenant's carelessness or indifference in the preservation of good order and cleanliness. Landlord shall not be responsible to any tenant for any loss of property on the Premises, however occurring, or for any damage done to the effects of any tenant by the janitor or any other employee or other person. Janitor service shall include ordinary dusting and cleaning by the janitor assigned to such work and shall not include shampooing of carpets or rugs or moving of furniture or other special services. Janitor service will not be furnished on nights when rooms are occupied after 7:00 p.m. Window cleaning shall be done only by Landlord.

12. Tenant shall not use, keep or permit to be used or kept any foul or noxious gas or substance in the Premises, or permit or suffer the Premises to be occupied or used in any manner offensive or objectionable to Landlord or other occupants of the Building by reason of noise, odors and/or vibrations, or interfere in any way with other tenants or those having business therein, nor shall any animals (other than as required for handicapped persons) or birds be brought in or kept in or about the Premises or the Building. No bicycles shall be brought into or kept in or about the Premises.

13. Other than heating and reheating in areas designed for such use, no cooking shall be done or permitted by Tenant on the Premises, nor shall the Premises be used for the manufacture or storage of merchandise, for washing clothes, for lodging, or for any improper, objectionable or immoral purpose.

14. Tenant shall not use or keep in the Premises or the Building any kerosene, gasoline or inflammable, explosive or combustible fluid or material, or use any method of heating or air-conditioning other than that supplied by Landlord. Tenant shall have the right to place a generator on the Premises in case of emergencies or equipment failure; provided, that the location of such generator shall be subject to Landlord's prior written reasonable approval, Tenant shall indemnify, defend and hold Landlord harmless from and against any claim, action, liability, cost, expense or damages arising out of the existence of the generator, and Tenant shall carry such additional insurance as would be prudent in connection with such generator being on the Premises.

15. Landlord will direct electricians as to where and how telephone and telegraph wires are to be introduced. No boring or cutting for wires or stringing of wires will be allowed without the written consent of Landlord. The location of telephones, call boxes and other office equipment affixed to the Premises shall be subject to the approval of Landlord.

16. Tenant shall not lay linoleum, tile, carpet or other similar floor covering so that the same shall be affixed to the floor of the Premises in any manner except as approved by Landlord. The expenses of repairing any damage resulting from a violation of this rule or removal of any floor covering shall be borne by Tenant.

17. Landlord reserves the right to close and keep locked all entrance and exit doors and otherwise regulate access of all persons to the halls, corridors, elevators and stairways in the Project on Sundays and legal holidays and on Monday through Friday between the hours of 7:00 p.m. and 7:00 a.m. and on Saturday from 1:00 p.m. for the remainder of the day, and at such other times as Landlord may deem advisable for the adequate protection and safety of the Project, its tenants and property in the Project. Access to the Premises may be refused unless the person seeking access is known to the employee of the Building in charge, and has a pass or is otherwise properly identified. Landlord shall in no case be liable for damages for any error with regard to the admission or exclusion from the Building or Project of any person.

18. Tenant shall see that the doors of the Premises are closed and securely locked before leaving the Building and must observe strict care and caution that all water apparatus in the Premises are entirely shut off before Tenant or Tenant's employees leave the Building, and that all electricity, gas or air shall likewise be carefully shut off, so as to prevent waste or damage.

19. Tenant shall not use the Premises in any manner which would increase the amount of water typically furnished for medical office use, nor connect any appliance directly to the water pipes.

20. Landlord may refuse admission to the Building outside of ordinary business hours to any person not known to the watchman in charge or not having a pass issued by Landlord or not properly identified, and may require all persons admitted to or leaving the Building outside of ordinary business hours to register. Any person whose presence in the Project at any time shall, in the sole judgment of Landlord, be prejudicial to the safety, character, reputation and interests of the Project or its tenants may be denied access to the Project or may be ejected therefrom. Landlord may require any person leaving the Building with any package or other object to exhibit a pass from the tenant from whose premises the package or object is being removed, but the establishment and enforcement of such requirement shall not impose any responsibility on Landlord for the protection of any tenant against the removal of property from the premises of any tenant.

21. The requirements of Tenant shall be attended to only upon application at the office of the Building. Employees of Landlord shall not perform any work or do anything outside of their regular duties unless under special instructions from the Landlord.

22. No person shall be allowed to transport or carry (except for individual, personal consumption) beverages, food, food containers, smoking objects, *etc.,* on any passenger elevators. The transportation of such items shall be via the service elevators in such manner as prescribed by Landlord.

23. Tenants shall cooperate with Landlord in obtaining maximum effectiveness of the cooling system by closing the window coverings when the sun's rays fall directly on windows of the Premises. Tenant shall not obstruct, alter or in any way impair the efficient operation of Landlord's heating, ventilating and air-conditioning system and shall not place bottles, machines, parcels or other articles on the induction unit enclosure, intake or other vents so as to interfere with air flow. Tenant shall not tamper with or change the setting of any thermostats or temperature control valves.

24. Landlord shall have the right, exercisable without notice and without liability to Tenant, to change the name and street address of the building of which the Premises are a part.

25. Landlord shall have the right to prohibit any advertising by any tenant which, in Landlord's opinion, tends to impair the reputation of the Building or its desirability as a location for offices, and, upon written notice from Landlord, any tenant shall refrain from or discontinue such advertising.

26. Canvassing, soliciting and peddling within the entire Project is prohibited unless specifically approved by Landlord, and each tenant shall cooperate to prevent such activity.

27. All parking ramps and areas plus other public areas forming a part of the Project shall be under the sole and absolute control of Landlord with the exclusive right to regulate and control these areas. Tenant agrees to conform to the rules and regulations that may be established by Landlord for these areas from time to time.

28. The Premises shall not be used for manufacturing or the storage of merchandise except as such storage may be incidental to the use of the Premises for medical office purposes. No tenant shall occupy nor permit any portion of its premises to be occupied for the manufacture or sale of narcotics, liquor, or tobacco in any form, or as a barber or manicure shop. No tenant shall engage or pay any employees on its premises except those actually working for such tenant on its premises nor advertise for laborers giving an address at the premises or Project. The Premises shall not be used for lodging or sleeping or for any immoral or illegal purposes.

29. Tenant shall not place any radio or television antennae on the roof of the Building or on any exterior part of the Premises or the Project.

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
Shenzhen Mingrui Consulting Co., Ltd.	China
Fulgent Genetics Canada Inc.	Canada
Shenzhen Fujin Gene Technology Co., Ltd.	China

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-213912 on Form S-8 of our report dated March 22, 2019, relating to the consolidated financial statements of Fulgent Genetics, Inc. and subsidiaries (which report expresses an unqualified opinion and includes an explanatory paragraph related to the Company's change in method of accounting for revenue from contracts with customers in fiscal year 2018 due to the adoption of the new revenue standard), appearing in this Annual Report on Form 10-K of Fulgent Genetics, Inc. for the year ended December 31, 2018.

/s/ DELOITTE & TOUCHE LLP

Los Angeles, California
March 22, 2019

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, 2018 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: March 22, 2019

By: /s/ Ming Hsieh
Ming Hsieh
President, 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, 2018 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: March 22, 2019

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, 2018 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: March 22, 2019

By: /s/ Ming Hsieh
Ming Hsieh
President, Chief Executive Officer
(principal executive officer)

Date: March 22, 2019

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.