

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

Amendment No. 2
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

SEQLL INC.

(Exact name of registrant as specified in its charter)

Delaware	3826	46-5319744
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

317 New Boston Street, Suite 210
Woburn, Massachusetts 01801
(781) 460-6016

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Daniel Jones
Chief Executive Officer
317 New Boston Street, Suite 210
Woburn, Massachusetts 01801
(781) 460-6016

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Eric M. Hellige, Esq.
Pryor Cashman LLP
7 Times Square
New York, New York 10036-6569
Telephone: (212) 326-0846
Fax: 212-326-0806

Barry Grossman, Esq.
Sarah E. Williams, Esq.
Matthew Bernstein, Esq.
Ellenoff Grossman & Schole LLP
1345 Avenue of the Americas
New York, New York 10105
Telephone: (212) 370-1300
Fax: (212) 370-7889

Approximate date of commencement of proposed sale to the public:

As soon as practicable after this Registration Statement is declared effective.

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

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

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

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Proposed maximum aggregate offering price ⁽¹⁾⁽²⁾	Amount of registration fee ⁽³⁾
Units consisting of:		
(i) Common Stock, par value \$0.00001 per share	\$ 12,650,000	\$ 1,380.12
(ii) Warrants to purchase Common Stock ⁽⁴⁾	—	—
Common Stock issuable upon exercise of the Warrants	12,650,000	1,380.12
Underwriter's Warrants ⁽⁴⁾	—	—
Common Stock issuable upon exercise of the Underwriter's Warrants ⁽⁵⁾	695,750	75.91
Total Registration Fee	<u>\$ 25,995,750</u>	<u>\$ 2,836.15⁽⁶⁾</u>

- (1) Estimated solely for purposes of calculating the amount of the registration fee pursuant to Rule 457(o) under the Securities Act. Includes the offering price of shares of common stock that the Underwriters have the option to purchase to cover over-allotments, if any.
- (2) Pursuant to Rule 416 under the Securities Act of 1933, as amended, or the Securities Act, the shares of common stock registered hereby also include an indeterminate number of additional shares of common stock as may from time to time become issuable by reason of stock splits, stock dividends, recapitalizations or other similar transactions.
- (3) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.
- (4) No separate fee is required pursuant to Rule 457(i) of the Securities Act.
- (5) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(g) under the Securities Act. The representative's warrants are exercisable at a per share exercise price equal to 110% of the public offering price. As estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(g) under the Securities Act, the proposed maximum aggregate offering price of the underwriter's warrants is equal to 110% of \$632,500 (which is 5% of \$12,650,000).
- (6) Of which \$2,578.31 was previously paid.

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

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JUNE 25, 2021

PRELIMINARY PROSPECTUS



**2,315,789 Units consisting of
2,315,789 Shares of Common Stock and
Warrants to purchase up to 2,315,789 Shares of Common Stock**

SeqLL Inc. is offering units, or Units, each consisting of one share of our common stock and one warrant to purchase one share of our common stock, or each, a Warrant, in an initial public offering. No public market currently exists for our common stock or the Warrants comprising the Units. The estimated initial public offering price per Unit is between \$4.25 and \$5.25 per share, and the number of Units offered hereby is based upon an assumed offering price of \$4.75 per Unit, the midpoint of such estimated price range. The Units have no stand-alone rights and will not be certificated or issued as stand-alone securities. The common stock and Warrants are immediately separable and will be issued separately in this offering. Each Warrant offered hereby is immediately exercisable on the date of issuance at an exercise price of \$ per share of common stock (which shall not be less than 100% of the public offering price per Unit), and will expire five years from the date of issuance.

We have applied to list our common stock and Warrants on the Nasdaq Capital Market, or Nasdaq, under the symbols “SQL” and “SQLLW,” respectively. There can be no assurance that we will be successful in listing our common stock or Warrants on Nasdaq.

We are an “emerging growth company” as that term is defined in the Jumpstart Our Business Startups Act of 2012, and as such, have elected to take advantage of certain reduced public company reporting requirements.

Investing in our common stock involves a high degree of risk. Please read “Risk Factors” beginning on page 14 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Unit	Total
Public offering price	\$	\$
Underwriting discounts and commissions ⁽¹⁾	\$	\$
Proceeds to us, before expenses	\$	\$

- (1) Does not include warrants that are issuable by us to the underwriters for 5% of the shares of common stock sold in the offering at a price per share equal to 110% of the initial public offering price or certain out-of-pocket expenses of the underwriters that are reimbursable by us. See “Underwriting” beginning on page 97 of this prospectus for a description of the compensation payable to the underwriters.

We have granted the representative of the underwriters an option, exercisable within 45 days from the date of this prospectus, to purchase from us, up to an additional 347,368 shares of common stock at the public offering price of \$4.75 per share and/or up to an additional 347,368 Warrants to purchase up to 347,368 shares of common stock at the public offering price of \$ per Warrant, less, in each case, the underwriting discounts and commissions, to cover over-allotments, if any. If the representative of the underwriters exercises the option in full, the total underwriting discounts and commissions payable will be \$, and the total proceeds to us, before expenses, will be \$.

Certain of our existing securityholders and their affiliated entities that are affiliated with certain of our current and former directors, including St. Laurent Investments, LLC, have indicated an interest in purchasing up to an aggregate of approximately \$1.5 million worth of Units in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no Units to any of these securityholders and any of these securityholders could determine to purchase more, less or no Units in this offering. The underwriters will receive the same underwriting discounts and commissions on any Units purchased by these securityholders as they will on any other Units sold to the public in this offering.

Delivery of the securities comprising the Units is expected to be made on or about , 2021.

Sole Book-Running Manager

Maxim Group LLC

The date of this prospectus is , 2021

TABLE OF CONTENTS

	Page
Glossary of Certain Scientific Terms	iii
Prospectus Summary	1
Summary Financial Data	13
Risk Factors	14
Cautionary Note Regarding Forward-Looking Statements	36
Use of Proceeds	37
Dividend Policy	39
Capitalization	40
Dilution	42
Management's Discussion and Analysis of Financial Condition and Results of Operation	45
Business	54
Management	72
Executive Compensation	78
Principal Stockholders	84
Certain Relationships and Related Party Transactions	87
Description of Capital Stock	89
Shares Eligible for Future Sale	96
Underwriting	98
Legal matters	104
Experts	104
Where You Can Find More Information	104
Index to Financial Statements	F-1

We have not, and the underwriters have not, authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the securities offered hereby, but only under the circumstances and in the jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

MARKET AND INDUSTRY DATA

Certain of the market data and other statistical information contained in this prospectus, such as the size, growth and share of the services industry, are based on information from independent industry organizations and other third-party sources, industry publications, surveys and forecasts. The global DNA next generation sequencing market information referenced in this prospectus is based on *DNA Next Generation Sequencing Market* published by The Insight Partners on January 2019. The global RNA next generation sequencing market information referenced in this prospectus is based on *NGS-Based RNA Seq. Market* published by The Insight Partners on December 2018. Some market data and statistical information contained in this prospectus are also based on our management's estimates and calculations, which we derived from our review and interpretation of the independent sources, our internal market and brand research and our knowledge of the industries in which we operate. While we believe that each of these studies and publications is reliable, neither we nor the underwriters have independently verified market or industry data from third-party sources. We also believe our internal company research is reliable and the definitions of our market and industry are appropriate, though neither this research nor these definitions have been verified by any independent source. Information that is based on estimates, forecasts, projections or similar methodologies is inherently subject to uncertainties, and actual events or circumstances may differ materially from events and circumstances that are assumed in this information.

Although we are not aware of any misstatements regarding the industry data that we present in this prospectus, our estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under "Risk Factors," "Forward-Looking Statements," and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this prospectus.

TRADEMARKS AND TRADE NAMES

We use our registered trademarks and trade names, such as "SeqLL[®]," "tSMS[®]," and "DRS[®]," in this prospectus. Solely for convenience, trademarks and trade names referred to in this prospectus appear without the [®] and [™] symbols, but those references are not intended to indicate that we will not assert, to the fullest extent under applicable law, our rights, or that the applicable owner will not assert its rights, to these trademarks and trade names. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

GLOSSARY OF CERTAIN SCIENTIFIC TERMS

The medical and scientific terms used in this prospectus have the following meanings:

“Bioinformatics” means a subdiscipline of biology and computer science concerned with the acquisition, storage, analysis, and dissemination of biological data, most often DNA and amino acid sequences.

“cDNA” means complementary DNA created from RNA through the use of reverse transcriptase.

“DNA” means deoxyribonucleic acid, a self-replicating material present in nearly all living organisms as the carrier of genetic information.

“Double helix” is a structure formed by a pair of parallel helices intertwined around a common axis. DNA is a double helix.

“DRS” means Direct RNA Sequencing, a method for sequencing RNA molecules without conversion to complementary DNA (“cDNA”) or amplification via PCR.

“Epigenetic” is the changes in gene expression that do not involve changes in the DNA sequence.

“FDA” means the U.S. Food and Drug Administration.

“Flow cell” means an optical cell used for detection and measurement of biological samples.

“Gene” is a portion of a DNA that serves as the basic unit of heredity.

“Gene expression” is a process by which information from a gene is used for the synthesis of a functional product.

“Genome” is an organism’s complete set of DNA.

“Genomics” refers to the study of all an organism’s genes and their interactions to influence the organism. Large-scale studies are required to understand how changes in an organism’s genes influence the organism.

“Helix” is an extended spiral chain of molecules.

“LDT” means Laboratory Developed Tests.

“Ligation” is a process of joining two DNA strands by chemical linkage.

“Microfluidics” is the science of manipulating and controlling fluids, usually in very small ranges.

“Next Generation Sequencing” means a high-throughput sequencing to sequence DNA and RNA molecules much more quickly and cheaply than the previously used techniques.

“NGS” means Next Generation Sequencing.

“Nucleic Acid” means a complex organic substance present in living cells, such as DNA or RNA.

“Nucleotide bases” or “Nucleotides” are building blocks of nucleic acids and include adenine (“A”), cytosine (“C”), guanine (“G”), thymine (“T”) and uracil (“U”).

“Omics” refers to various different biological analyses approaches whereby researchers can analyze complex biological data, often in high throughput methods, to find novel associations between biological entities, pinpoint relevant biomarkers and build elaborate markers of disease and physiology. Examples of various “omics” analyses include: genomics, proteomics, transcriptomics, epigenomics, and metabolomics. When two or more of the -omics analyses approaches are combined either directly in analyses and/or in examination of -omics data sets, the approach is referred to as “multi-omics.”

“PCR” means Polymerase Chain Reaction, which is a technique used to generate multiple copies (thousands to millions) of DNA sequences.

“Proteomic(s)” refers to the large-scale study of proteins. The proteome is the entire set of proteins that is produced or modified in an organism or system.

[Table of Contents](#)

“RNA” means ribonucleic acid, a material present in all living cells which acts as a messenger carrying instructions from the DNA for controlling the synthesis of proteins.

“RNA-Seq” means RNA Sequencing, an NGS method that involves the conversion of RNA into cDNA for subsequent sample preparation and sequencing.

“Throughput” refers to the rate at which an assay can be performed on during a given time period.

“Transcript” is a single stranded RNA synthesized by transcription of DNA.

“Transcriptome” refers to the sum of all RNA molecules, inclusive of noncoding and coding RNAs, that are contained within a population of cells or a single cell.

“tSMS” means True Single Molecule Sequencing.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and does not contain all of the information that you should consider before investing in our securities. This summary is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus. You should read this entire prospectus carefully, including the information set forth in the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes thereto contained in this prospectus, before making an investment decision. Unless the context requires otherwise, references in this prospectus to “we,” “us,” “our,” “our company,” or similar terminology refer to SeqLL Inc.

Overview

We are a development-stage life sciences instrumentation and research services company engaged in the development of scientific assets and novel intellectual property across multiple “omics” fields. We intend to leverage our expertise with True Single Molecule Sequencing (“tSMS”) technology to enable researchers and clinicians to contribute major advancements to scientific research and development by accelerating one’s understanding of the molecular mechanisms of disease and fundamental biological processes. We believe our proprietary sequencing technology platform has critical advantages over existing Next Generation Sequencing (“NGS”) technologies, particularly for emerging applications in the research and development of biomarker discovery, epigenetics, nucleotide chemistry, forensics, and cell-free nucleic acid analysis. Our mission is to empower researchers with improved genetic tools that enable scientists and physicians to better understand the molecular mechanisms of disease and the underlying biological systems. This knowledge is essential to the continued development of new breakthroughs in genomic medicine that address the critical concerns involved with today’s precision medicine.

Our single molecule technology enables researchers to identify and synthesize DNA or RNA strands, irrespective of abundance, in a biological sample and is capable of analyzing billions of molecules in parallel, which positions us as both competitive and complementary with other NGS platforms. We believe our technology advantage is a simplified method of quantifying DNA and RNA molecules at single molecule resolution because our platform does not require the routine PCR amplification and ligation steps required during library preparation by most NGS systems, thereby avoiding systematic bias and consequential additional costs. Our current sequencing platform offers advantages, such as the ability in certain samples to reveal previously-unknown molecular profiles, by directly detecting single molecules with little to no manipulation of the original sample. Our tSMS platform then generates data that is highly-accurate and creates reproducible molecular profiles, often providing researchers with new insights into the biology being researched. As supported by multiple peer-reviewed research publications, our tSMS technology platform has assisted medical researchers in uncovering potentially significant DNA and RNA biomarkers for the early detection of diseases.

Our strategy is to integrate the tSMS platform with the development of novel applications across multiple market segments, and to generate revenue through sales of partnership-specific systems and related flowcells and reagents, which we refer to as “sequencing kits”, research services and research grants. We do not offer or sell any products that are founded upon or incorporate our tSMS platform directly to healthcare professionals or consumers. To strengthen our market position, we strive to build and control intellectual property around the instruments, sequencing kits and methods that enable these applications. Integral to this strategy will be to work with existing customers in developing new instruments optimized for specific assay and chemistry performance in order to support a wide array of applications. Our target customers are consumers of NGS products and services engaged in research activities and the development of new or improved products, such as academic and government institutions, hospitals and medical centers, pharmaceutical and biotechnology companies, and non-profit research organizations.

Under our current operating model, we expect the revenues we generate from a specific customer to scale as our partnership or collaboration with such customer matures and intellectual property founded on our tSMS platform is developed and sold by such customer. Initially, our customer-specific revenues are typically dependent on the funding of, or research grants obtained by, our partners and their ability to successfully develop novel products. During the early stages of our partnerships or collaborations, we generally derive revenue from research services, grants, and the sale of customized instruments and sequencing kits as intellectual property is developed. Over the next three to five years, however, we expect to generate increasing revenues from our customers from the sale of application-specific assays or tests that are developed on our platform and for which we will receive royalties, a revenue split or other remuneration for the use of our platform or jointly-developed intellectual property.

Background on Genetic Sequencing

Genetic inheritance in living systems is conveyed through a naturally-occurring information storage system known as deoxyribonucleic acid, or DNA. DNA stores information in linear chains of chemical bases known as adenine (“A”), cytosine (“C”), guanine (“G”) and thymine (“T”). Inside living cells, these chains usually exist in pairs bound together in a double helix by complementary base pairs. A “genome” is an organism’s complete set of DNA, which for humans consists of approximately three billion DNA base pairs. Ribonucleic acid, or RNA, is a molecule used by organisms to convey genetic information. A “transcriptome” is an organism’s complete set of RNA molecules at an active cellular state and includes both protein coding and noncoding RNA transcripts.

Genetic sequencing is the process of determining the order of nucleotide bases (A, C, G, or T) in a sample. This consists of three phases: sample preparation, physical sequencing and analysis. Generally, the first step of sample preparation is either to shear the target genome into multiple small fragments or, depending on the amount of sample DNA or RNA available, amplify the target region using a variety of molecular methods. In the physical sequencing phase, the individual bases in each fragment are identified in order, creating individual sequence reads. The number of individual bases identified contiguously is defined as “*read length*.” The sequencing throughput is generally defined as the product of the number of individual sequence reads and the average read length of the sequence reads. In the analysis phase, bioinformatics software is used to align overlapping reads, which allows the original genome to be assembled into contiguous sequence.

Studying genomes and transcriptomes helps scientists understand the inheritance of biological characteristics, developmental biology and normal and disease states of cells and organisms. Genetic variation accounts for many of the differences between individuals, such as eye color and blood group, and also affects a person’s susceptibility to certain diseases such as cancer, heart disease or diabetes. Genetic variation can also determine a person’s response to drug therapies.

A trend in healthcare is towards ‘personalized medicine’ to enable more accurate diagnosis and treatment through better understanding of each individual patient’s disease. We believe that a greater understanding of the genome will lead to this new healthcare paradigm where diseases are understood at the molecular level, allowing patients to be diagnosed according to genetic information, in many instances earlier and more accurately, and be treated with drugs designed to work on specific molecular targets. The goal is to offer precision-personalized medicine that will identify disease earlier, reduce healthcare costs, and enable more appropriate and effective treatment for better outcomes and quality of life. To date, this has largely been done through genomic testing, which provides information about a patient’s predisposition to disease or likely response to medication, due to each individual’s unique constellation of genes. However, DNA testing is, in most cases, a static readout that does not change through a patient’s lifetime or disease course. It does not provide information about the patient’s current health status. An increasing number of researchers, however, now believe the transcriptome provides dynamic information about the current state of the body that can be used to assess health, to detect early signs of disease and to enable physicians to select the appropriate treatment, monitor response to treatment and detect unwanted side effects.

Cell-free Nucleic Acids as Disease Biomarkers: Most of the DNA and RNA in the body are inside the cells, but a small amount of nucleic acids is also found in biological fluids such as blood, saliva and urine. This material is generally referred to as cell-free DNA (“cfDNA”) and cell-free RNA (“cfrRNA”). Analysis of these free-floating molecules can lead to multiple applications such as early disease detection, drug selection and treatment monitoring. For example, a large amount of cell-free DNA material might indicate a bacterial infection or sepsis in very early stages. Cell-free DNA is typically derived from chromatin as intact nucleosomes, or histone-bound DNA, which can be analyzed in addition to solely assessing DNA. Another such example is cfrRNA analysis for detection, diagnosis and monitoring of malignant diseases such as cancer. The cfrRNA transcripts are differentially expressed between normal and cancerous tissues. These transcripts can be used as a reliable biomarker for cancer screening and diagnostic applications. Analysis of cfrRNA can be used to measure dynamic changes in the gene expression, allow oncologists to evaluate disease status, predict outcomes from anti-tumoral therapies and monitor the disease after treatment.

Sequencing Technologies: There are different sequencing technologies available for sequencing genetic material, each producing the sequence data in a unique format. Some of the technologies produce millions of sequence reads with a very short-read length, generally less than 300 nucleotide bases. These technologies are generally referred to as short-read NGS platforms. Other technologies produce several thousand sequence reads of a very long-read length, generally more than 1000 nucleotide bases. These technologies are generally referred to as

long-read NGS platforms. Both the short- as well as long-read NGS technologies have their advantages in various settings. For *de novo* assembly of genomes and long RNA transcripts, the long contiguous reads from the long-read NGS technologies are preferred. Generally, short reads can be used to further fill in gaps in the data from longer read technologies. For molecular counting applications, a large number of independent reads from short-read NGS technologies are preferred. Different genes are present in varying amounts in biological samples, and the success of the technique is highly-dependent on the dynamic range of the detection technology.

There are multiple NGS technologies available in the market, offered by companies such as Illumina, Inc, Pacific Biosciences of California, and Thermo Fisher Scientific Inc., that partially address the need for accurate and sensitive analysis of genetic information. These technologies can further be classified based on the resolution of the technology as single-molecule sequencing technologies and amplification-based technologies. Most single-molecule sequencing technologies do not require amplification, though many of the long-read technologies still require complex sample manipulation prior to sequencing. This is especially true for the sequencing of RNA molecules. Over the past two decades, researchers and clinicians have used these technologies to gain a deeper understanding of nucleic acids, to study biomarkers associated with disease, to identify molecules for new drug discovery, to create novel applications for early screening and diagnosis, and more recently to create genome-editing techniques. While researchers are making progress on various fronts by utilizing a combination of these technologies, there remains a wide gap between the needs of the research community and the capabilities of existing sequencing tools. This gap is hindering the advancement of scientific research. The inherent limitations of current technologies are summarized below:

- **Biased results:** Short-read NGS technology typically requires a large number of DNA molecules during the sequencing process. To generate enough DNA molecules, an amplification step is required during sample preparation. This amplification process can introduce errors known as amplification bias. The effect of this bias is that resulting copies are not uniformly representative of the original template DNA, causing skewed data representation in the final results.
- **Lower sensitivity:** In cases where the original template DNA contains regions of relatively high G-C content or relatively high A-T content, the amplification process tends to under-represent these regions. As a result, these regions, which may contain entire genes, can be completely missed. As a result, the non-linear nature of the amplification may limit its ability to detect subtle changes in the genetic signature.
- **Inefficient library preparation:** Many of our competitors use systems requiring multi-step sample preparation protocols to prepare sample libraries before sequencing. This library preparation technique is inefficient, capturing only a fraction of the informative input material. The process selectively captures the molecules which are present in large quantities while losing lower frequency molecules, thus not producing a true representation of the input material. The library preparation protocol limits the minimal amount of input sample. The library preparation steps also add significant burden on the sample preparation.
- **Inadequate throughput:** Applications such as transcriptome profiling, gene expression and biomarker discovery require accurate quantification of data. We believe the long read single molecule technologies fall short due to the smaller number of strand throughput required to substantiate the presence or absence of a biomarker in a specific sample. The short-read amplification technologies are limited due to a skewed data representation caused by the non-linear amplification bias present in the workflow.

Our Technology Solution

Our tSMS platform offers a single molecule solution for DNA and RNA sequencing by performing detection of nucleic acids without the need for complex sample manipulation. Researchers using our platform can analyze many billions of single molecules in a single experiment and still generate highly accurate and reproducible data. We believe our technology's critical advantage over other technologies is because our platform does not require the routine library preparation steps, such as PCR amplification and ligation, necessary for use with most NGS systems, thereby avoiding systematic amplification bias. RNA sequencing on our platform detects transcripts regardless of abundance and with high accuracy in quantifying gene expression changes associated with certain disease as well as detecting subtle changes in RNA transcript levels that are undetectable with other methods.

Our single molecule platform is unique because it combines a proprietary fluorescence-based optical detection apparatus with a precision microfluidics and thermal control system to perform sequencing-by-synthesis reactions, as illustrated in Figure 1 below.

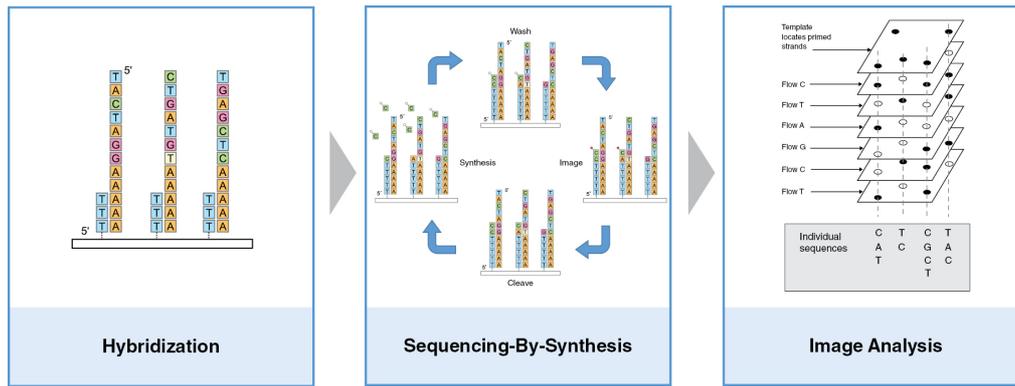


Figure 1. tSMS Technology Workflow

The single molecule fluorescence signal from millions of individual strands is captured by images using a high-sensitivity camera during multiple cycles of nucleotide incorporation. Our powerful image analysis system processes these images to produce the sequence data as an output. The output data contains millions of individual unique sequences with the average read length of between 35–60 nucleotide bases, with a range of 20–100 nucleotide bases. This length is sufficient to allow unambiguous identification of the origin of each sequence.

By giving short-read technology the power of single molecule resolution, we believe our tSMS technology offers critical advantages over existing technologies, including:

- Greater Sensitivity.** The tSMS platform offers a high level of sensitivity as each strand is identified and synthesized irrespective of its abundance in the sample. In the existing amplification-based technologies, low expressing transcripts are typically masked due to preferences and may be missed or have their numbers minimized in the final data analysis. The simplified sample preparation along with single molecule resolution generally facilitates the unbiased, proportionate representation of input sample, even of the low expressing transcripts and constructs. This allows for obtaining more accurate information earlier, and for clinical treatments or decisions to be made sooner.
- High Accuracy.** The tSMS platform provides an accurate set of data and results as well as a broader range of molecules to be evaluated. The ability to count each individual molecule, combined with simplified sample preparation and greater sample sensitivity, yields an accurate quantitative representation of sample in the final data. Our technology has been demonstrated to produce robust accurate short reads for a variety of applications.
- Minimal Sample Preparation.** The tSMS platform offers a simple sample preparation process. The DNA strands are cut in shorter sizes, converted into single strands, and then tagged with a universal surface capture primer. By avoiding the complex multi-step library preparation method, the sample integrity is preserved, and the bias and errors in the sequence data output exhibited by other methods are avoided.
- Seamless Flexibility.** Our tSMS platform provides flexibility in two main aspects — throughput and applications. The tSMS platform has the ability to scale throughput across a range of small to large projects. The programmable instrument workflow and modular design of sequencing kit components provide flexibility to choose the sample coverage and read length required for the final data. The simplified sample preparation allows for analysis of any genetic material that can be attached to a glass surface.

Market Opportunity

The market for our products and services is segmented into two major categories, DNA NGS and RNA NGS, which, according to The Insight Partners, accounted for a combined addressable market opportunity of approximately \$1.03 billion in 2019 that is projected to grow to \$5.26 billion by 2025 at a compound annual growth rate (CAGR) of 31.3%.

DNA NGS market opportunity: According to The Insight Partners *DNA NGS Market Report 2019*, the global DNA NGS market is projected to grow from \$6.82 billion in 2019 to \$22.72 billion in 2025 at a CAGR of 22.2% from 2019 to 2025. Our customers in the DNA NGS market largely consist of academic and research institutes and forensic labs. Collectively, academic and research institutes and forensic labs, pathology labs and diagnostic centers represent a projected 58.4% of the end-user market share in 2019. Our targeted end users, applications and regions for DNA NGS represented an addressable market opportunity of \$0.74 billion in 2019 that is projected to grow to \$4.10 billion in 2025 at a CAGR of 33.0%.

RNA NGS market opportunity: According to The Insight Partners *NGS-based RNA Seq. Market Report 2019*, the global RNA NGS market is projected to grow from \$1.63 billion in 2019 to \$4.96 billion in 2025 at a CAGR of 20.4%. The RNA NGS market can be segmented by products and services, end users, applications and sequencing technologies. Research and academic centers, pharmaceutical and biotech companies, and pathology labs forensic labs and diagnostic centers represented a projected 76.7% share of the end users in 2019. Our targeted end users, applications and regions for RNS NGS represented an addressable market opportunity of \$0.29 billion in 2019 that is projected to grow to \$1.16 billion in 2025 at a CAGR of 26.2%.

Markets for Our Technology

The initial target market for our instruments and research services has been the life sciences research and development market where we provide solutions for a variety of applications, including biomarker discovery and diagnostic assay developments. This market includes laboratories associated with universities, scientific research centers, government institutions, and biotechnology and pharmaceutical companies.

Introductions of new technologies and products, while positive to the overall development of these markets, may result in greater competition for the limited financial resources available. There are a number of emerging markets for sequencing-based technologies that represent significant potential opportunities for us, including:

- **Life sciences research and development:** NGS technologies are accelerating the discovery and development of more effective new drugs. The complex nature of biological pathways, disease mechanisms and multiple drug targets requires an accurate, unbiased, and sensitive molecular counting platform. Single molecule sequencing, with its unparalleled quantitative accuracy in large-scale expression profiling, could enable high-throughput screening of promising drug leads. During clinical trials, our technology could potentially be used for companion diagnostics to generate individual genetic profiles that can provide valuable information on likely response to therapy, toxicology or risk of adverse events. The tSMS platform may also enable more precise selection of patient pools and individualization of therapy.
- **Liquid biopsy:** Liquid biopsy is emerging as a simple and non-invasive alternative to the traditional tissue biopsy approach for disease screening and monitoring. A simple draw of blood vial contains millions of tiny fragments of cell-free DNA/RNA material with lengths on the order of 100–200bp, which carry informative signatures of cancer and other life-threatening diseases even in a very early stage of the disease progression. With its quantitative accuracy, simple sample preparation methodology, and its ability to accurately sequence fragmented short molecules, our single molecule sequencing offers an excellent solution for liquid biopsy.
- **Infectious disease:** Infectious diseases are disorders caused by bacteria, viruses and fungi. These organisms contain DNA and RNA that act as infectious agents to transmit disease from person to person, by insect or animal, or through food and environmental means. The detection and sequencing of the DNA and RNA from pathogens provides medically actionable information for diagnosis, treatment and monitoring of infections. Accurate sequence information could also help to predict drug resistance.

- Clinical diagnostics:** Our amplification and ligation-free sequencing method allows us to identify subtle changes in the RNA transcript levels that are undetectable with other methods presumably due to bias and loss of low-level transcripts inherent to the other technologies. The power of our tSMS technology can help to address the large unmet need for biomarker discovery to diagnose diseases such as cardiovascular diseases and cancer at very early stages.
- Microbiome analysis:** Microbial communities in and on the body show uniform bacterial diversity in healthy individuals. Drugs and diet can disrupt the microbial diversity, and thereby can affect disease progression and treatment efficacy. Our technology can accurately quantify the gene signature for all bacteria present and capture a real-time snapshot of the microbiome. This data can be used by physicians for disease treatment by applying methods to encourage growth of beneficial microbes and eliminate harmful microbes.

These examples of emerging markets for sequencing-based technologies represent significant potential opportunities for us. The development of these markets is subject to variability driven by ongoing changes in the competitive landscape, evolving regulatory requirements, government funding of research and development activities, and macroeconomic conditions. Given the ability of the tSMS platform to sequence nucleic acid fragments as well as to detect post-translational modifications within larger chromatin molecules, we believe our technology is uniquely positioned to produce data from molecules at both ends of the single molecule nucleic acid spectrum. This concept, and the technology leaders for each single molecule market segment, is illustrated in Figure 2 below, with our potential applications highlighted in blue font.

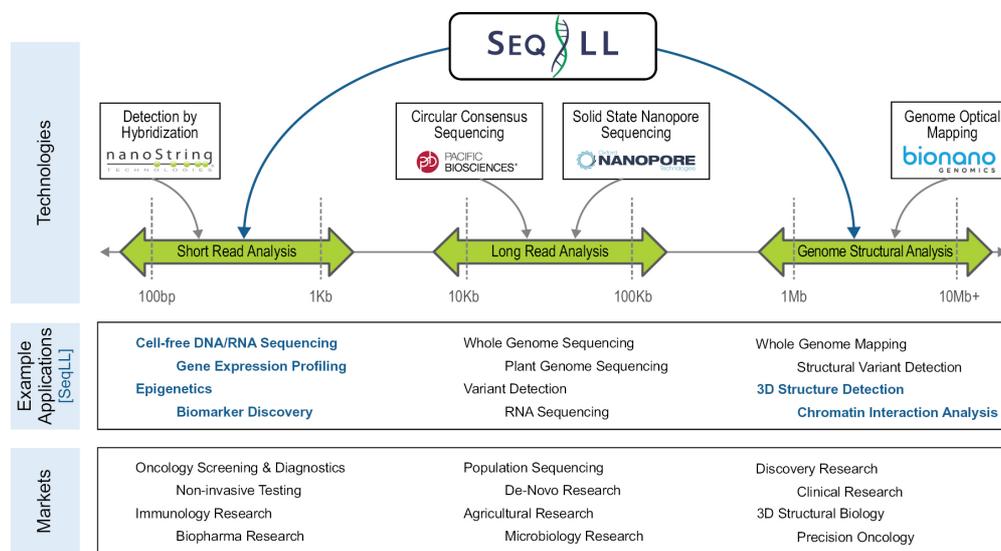


Figure 2. Illustrative Single Molecule Nucleic Acid Landscape

As our partners or collaborators expand their product lines to address the diagnosis of disease, regulation by governmental authorities in the United States will become an increasingly significant factor in development, testing, production and marketing. We have not sought FDA approval of our sequencers because to-date we have marketed them only for research purposes and not for clinical diagnostics. Through our partners or collaborators, we will likely need to assist in pursuing regulatory approvals from the FDA when they attempt to enter the diagnostics market, which approvals are expensive and involve a high degree of risk and for which there is no assurance that we or our partners will be able to develop a commercially-viable product. Even if the products under development are authorized and approved by the FDA, our partners or collaborators must still meet the challenges of successful marketing, distribution and customer acceptance. We do not intend to use proceeds from this offering to pursue FDA approval. If significant funds are required from us in seeking to obtain any FDA approval in the future, we intend to raise additional funds for such purpose prior to pursuing FDA approval.

Our Strategy

Our strategy is to integrate our tSMS platform with the development of novel applications across multiple market segments, and to generate revenue through partnership-specific system and sequencing kit sales, research services and research grants. Our target customers are consumers of NGS products and services engaged in research activities and the development of new or improved products, such as academic and government institutes, hospitals and medical centers, pharmaceutical and biotechnology companies, and non-profit research organizations. Integral to this strategy will be to work with existing customers in developing new instruments optimized for specific assay and chemistry performance in order to support a wide array of applications.

We have generated only nominal revenues to date from our current operating model and we do not expect our revenues to scale significantly until one or more of our customers or third-party partners or collaborators has developed application-specific assays or tests for which our platform serves as a foundation. As a result, we believe our ability to continue to operate at current levels is dependent on the success of this offering. Over the longer term, we expect to generate revenues from our customers, partners and collaborators through a combination of product sales, research services and research grants. We plan to expand these revenues from recurring and prospective clients by the following key strategies:

- Provide the scientific community with a combination of research services and NGS instrumentation to serve markets that we believe are inadequately addressed by existing technologies.
- Assist in the development of new classes of RNA-based diagnostics tests.
- Collaborate with researchers to enhance pharmacogenomics and biomarker discovery.
- Support drug developers seeking a better understanding of the side effects of their new drugs.
- Continue to innovate and develop new aspects of our products and technology, applications and instrumentation through scientific collaborations, including grants.
- Leverage our expertise and the broad applicability of our tSMS platform to grow into new markets through strategic collaborations, partnerships, existing data sets, and customers.
- Maintain a strong culture and network of technical resources while seeking to continuously attract new talent to build an industry-leading single molecule solutions company.

We expect to use a portion of the net proceeds of this offering to support our research and development activities and to improve and update our tSMS platform to develop additional applications in support of our existing partnerships and collaborations. While we anticipate increased revenues as a result of those efforts, we are planning to raise additional funds following this offering to support our existing partners and collaborators and to fund the initial costs of new relationships.

We have assembled an experienced management team, board of directors, and scientific founders and advisors who bring industry experience to our company and business strategy. We believe the members of our team have deep experience in discovering, developing and commercializing products with a particular focus on sequencing products and applications.

Our Customers and Collaborators

Our customers and collaborators are focused on academic research, biomarker discovery, and molecular diagnostic product development. The majority of our current customers and collaborators are early adopters of genomics technology, including tSMS. Over the years, they have produced scientific achievements through collaborative research efforts by accessing our technology. We often collaborate with customers to drive innovation in the field of genomic sciences through grant-funded research activities and we do not yet generate significant revenues from these activities from the sale of our products or services. In addition, we have not yet entered into any

material agreements with any of these entities as to how our technology is currently being used by them or will be used by them in the future. Our key collaborators and our current activities are summarized below, and highlighted in more detail in the “Business Section” beginning on page 54 of this prospectus:

Bernstein Laboratory

We have worked closely with the lab of Bradley Bernstein, M.D., Ph.D. at Massachusetts General Hospital and Harvard Medical School to address fundamental questions in chromatin biology and epigenetic regulation. Dr. Bernstein is also the founder and Director of the Broad Institute Epigenomics Program. Scientists from the Broad Institute have used antibody-based detection coupled with tSMS to begin decoding a dual-marking system in modified histones that signals for a gene to be activated or repressed. Early results, published in *Science*, suggest differentiated cells exhibit different patterns of “bivalent” markings than embryonic cells. Our collaboration encompasses technology development, single-cell RNA and DNA analysis, and the creation of novel intellectual property. In addition to completing NIH grant-funded research activities, to date, we have provided Dr. Bernstein with tSMS systems and onsite support. We also have submitted a technology development manuscript for peer review at a leading scientific journal and expect to provide the Bernstein Lab early access to new prototype systems in the second half of 2021.

Ting Laboratory

We have been a long-time research collaborator with David Ting, M.D., Assistant Professor, Medicine at Harvard Medical School and a leading member at the Dana Farber/Harvard Cancer Center in using tSMS to better understand cancer. His research is focused on the role of non-coding RNA transcription in cancer as it relates to tumorigenesis and as novel biomarkers. In this research area, the Ting Laboratory was first to discover aberrant overexpression of pericentromeric RNA repeats by RNAseq using tSMS, which were found to play a significant role in pancreatic cancer and other epithelial cancers [Bersani, *PNAS*, December 2015]. This discovery resulted in new intellectual property related to pancreatic cancer biomarkers and the subsequent founding of Rome Therapeutics, an early-stage company focused on unlocking the repeatome to discover powerful new classes of medicines for cancer and autoimmune diseases. To date, we have provided Dr. Ting with tSMS systems and onsite support, research services and access to sample preparation methodologies.

The Jackson Laboratory for Genomic Medicine

Led by Chia-Lin Wei, Ph.D. with The Jackson Laboratory (“JAX”) and supported by a recent four-year, \$2.3 million grant from the National Institute of General Medical Sciences, we are assisting in the development of new methods for chromatin interaction analysis in single nuclei, with single-molecule resolution. JAX has stated that preliminary results indicate that, once fully developed, the methods under development have the potential to exceed previous methodologies and to revolutionize the field of three-dimensional (“3D”) genome biology. Our research grant efforts, including instrument prototype and sequencing kit development, are continuing and will focus on generating genome-wide, single-molecule chromatin interaction maps in a variety of biological systems and uncovering the structural detail of multiplex chromatin loci that are currently unresolvable given standard NGS. We expect to provide JAX early access to newly-developed prototype systems in the second half of 2021.

Weizmann Institute of Science

In partnership with the laboratory of Efrat Shema, Ph.D., we have recently developed and applied innovative single-molecule technologies to gain a deeper understanding of chromatin regulation. We are working to establish robust single-molecule systems for genome-wide profiling of combinatorial chromatin and DNA modifications, as well as development of novel therapeutic and diagnostic tools. To date, we have provided this collaboration with access to prototype sequencing systems, sequencing kits and sample preparation methodologies. We have multiple manuscripts currently submitted for peer review at leading scientific journals and expect publication in the second half of 2021.

True Bearing Diagnostics, Inc.

We have participated in a research collaboration with Timothy McCaffrey, Ph.D. of The George Washington University’s Center of Genomic Medicine and True Bearing Diagnostics, Inc, performing tSMS on whole-blood RNA to identify transcripts associated with coronary artery disease (“CAD”). In comparison to other platforms that include NGS technologies, only our tSMS platform could consistently identify the novel mRNA signature in CAD

patients. We believe this collaboration will provide the blueprint for a diagnostic test that could significantly reduce the over one million U.S. catheterizations that are performed annually at a cost of approximately \$20 billion per year. A scientific manuscript detailing biomarker discovery efforts for CAD is currently in preparation and expected to be published in a peer reviewed journal in the first half of 2022. To date, we have provided to True Bearing Diagnostics research services and access to sample preparation methodologies. Potential future work includes the development of a CAD-focused clinical system for regulatory clearance.

Tetracore, Inc.

Tetracore, Inc. focuses on antibody-based and nucleic acid-based detection reagents and technologies, and contracts with the U.S. government for the development of real-time PCR diagnostic tests for biological warfare threat agents, novel nucleic acid extraction procedures, and specialized nucleic acid products. To date, we have provided Tetracore with tSMS systems and on-site support. We also are actively preparing applications for submission in the second half of 2021 to the NIH, DARPA and other funding agencies regarding the use of our technology in the development and production of detection tools. These potential products, including non-NGS applications, are for clinical, animal health, and domestic preparedness testing.

Summary Risks Associated with Our Business

Our ability to execute our business strategy is subject to numerous risks, as more fully described in the section captioned “Risk Factors” immediately following this prospectus summary. You should read these risks before you invest in our common stock and warrants. In particular, risks associated with our business include, but are not limited to, the following:

- As we have incurred recurring losses and negative cash flows since our inception, there is no assurance that we will be able to continue as a going concern absent additional financing.
- We are an early, commercial-stage company with a limited operating history.
- If our tSMS sequencing instruments or sequencing services fail to achieve and sustain sufficient market acceptance, we will not generate expected revenue and our business may not succeed.
- Our research and development efforts may not result in the benefits we anticipate, and our failure to successfully market, sell and commercialize our current and future sequencing instruments and services products could have a material adverse effect on our business, financial condition and results of operations.
- If we are unable to successfully develop and timely manufacture our sequencing instruments and reagents, our business may be adversely affected.
- We must successfully manage new product introductions and transitions related to the tSMS technology, we may incur significant costs during these transitions, and they may not result in the benefits we anticipate.
- We rely on other companies for certain components and materials and intend to outsource sub-assembly manufacturing in the future. We may not be able to successfully assemble or manufacture reagents and instruments or scale the manufacturing process necessary to build and test multiple products on a full commercial basis, which could materially harm our business.
- We may be unable to consistently manufacture our instruments and reagents to the necessary specifications or in quantities necessary to meet demand at an acceptable cost.
- Increased market adoption of our products by customers may depend on the availability of sample preparation and informatics tools, some of which may be developed by third parties.
- Single molecule sequencers are highly complex, have recurring support requirements and could have unknown defects or errors, which may give rise to claims against us or divert application of our resources from other purposes.

- If we lose members of our senior management team or other key personnel or are unable to successfully retain, recruit and train qualified scientists, engineers and other personnel, our ability to maintain and develop our products could be harmed and we may be unable to achieve our goals.
- A significant portion of our potential sales depends on customers' spending budgets that may be subject to significant and unexpected variation which could have a negative effect on the demand for our products.
- We are, and may become, subject to governmental regulations that may impose burdens on our operations, and the markets for our products may be narrowed.
- Our sales cycle is unpredictable and lengthy, which makes it difficult to forecast revenue and may increase the magnitude of quarterly or annual fluctuations in our operating results.

For a more detailed discussion of some of the risks you should consider, you are urged to carefully review and consider the section titled "Risk Factors" beginning on page 14 of this prospectus.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we remain an emerging growth company, we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies. These provisions include, but are not limited to:

- being permitted to have only two years of audited financial statements and only two years of related selected financial data and management's discussion and analysis of financial condition and results of operations disclosure;
- an exemption from compliance with the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act;
- reduced disclosure about executive compensation arrangements in our periodic reports, registration statements and proxy statements; and
- exemptions from the requirements to seek non-binding advisory votes on executive compensation or golden parachute arrangements.

In addition, the JOBS Act permits emerging growth companies to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We are not choosing to "opt out" of this provision. We will remain an emerging growth company until the earliest of (i) the end of the fiscal year following the fifth anniversary of the completion of this offering, (ii) the first fiscal year after our annual gross revenues exceed \$1.07 billion, (iii) the date on which we have, during the immediately preceding three-year period, issued more than \$1.0 billion in non-convertible debt securities or (iv) the end of any fiscal year in which the market value of our common stock held by non-affiliates exceeds \$700 million as of the end of the second quarter of that fiscal year.

Corporate Information

We were incorporated in Delaware on April 3, 2014. Our principal executive offices are located at 317 New Boston Street, Suite 210, Woburn, Massachusetts 01801, and our telephone number is (781) 460-6016. Our corporate website address is www.seqll.com. The information contained on or accessible through our website is not a part of this prospectus.

THE OFFERING

Units offered by us	2,315,789 Units, assuming a public offering price of \$4.75 per Unit, the midpoint of the initial public offering price range reflected on the cover page of this prospectus. Each Unit will consist of one share of common stock and one Warrant to purchase one share of common stock. The Units have no stand-alone rights and will not be certificated or issued as stand-alone securities. The common stock and Warrants are immediately separable and will be issued separately in this offering.
Common stock issued and outstanding prior to this offering	4,864,862 shares
Common stock to be issued and outstanding after this offering	10,953,168 shares, or 11,300,536 shares assuming that the underwriters exercise their over-allotment option in full (assuming in each case, no exercise of the Warrants), including 3,130,622 shares to be issued upon the conversion of our outstanding Series A preferred stock, and 641,895 shares to be issued on the conversion of outstanding indebtedness, immediately prior to the closing of this offering.
Description of the Warrants	The Warrants will have an exercise price of \$ per share of common stock, which shall not be less than 100% of the public offering price per Unit, will be immediately exercisable and will expire five years from the date of issuance. Each Warrant is exercisable for one share of common stock, subject to adjustment in the event of stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our common stock. A holder may not exercise any portion of a Warrant to the extent that the holder, together with its affiliates and any other person or entity acting as a group, would own more than 4.99% of our outstanding shares of common stock after exercise, as such ownership percentage is determined in accordance with the terms of the Warrants, except that upon notice from the holder to us, the holder may waive such limitation up to a percentage, not in excess of 9.99%. This prospectus also relates to the offering of the common stock issuable upon exercise of the Warrants. To better understand the terms of the Warrants, you should carefully read the "Description of Capital Stock" section of this prospectus. You should also read the form of Warrant, which is filed as an exhibit to the registration statement that includes this prospectus.
Over-allotment option	The underwriters have an option for a period of 45 days to purchase from us up to an additional 347,368 shares of common stock, at the public offering price of \$4.75, and/or up to an additional 347,368 Warrants to purchase up to 347,368 shares of common stock at the public offering price of \$ per Warrant, in each case less the underwriting discounts and commissions, solely to cover over-allotments, if any.

Use of proceeds	We currently intend to use the net proceeds from this offering as follows: (1) approximately \$4.0 million to expand our commercial operations to support life sciences research and applications development, including building additional sequencing instruments; (2) approximately \$2.5 million to improve and update our tSMS technology platform and to develop additional reagents; (3) approximately \$0.5 million to assist existing and future partners in obtaining regulatory approvals or clearances to develop instruments and reagents in areas beyond life science research, including possibly Laboratory Developed Tests; (4) approximately \$0.3 million to support and expand our marketing and business development efforts in the United States and internationally; (5) the payment of payables and interest on indebtedness totaling approximately \$0.5 million and (6) the balance for working capital and other general corporate purposes. See “Use of Proceeds” on page 37.
Risk Factors	See “Risk Factors” on page 14 a discussion of certain of factors to consider carefully before deciding to purchase any Units.
Proposed Nasdaq Capital Market Symbols	We have applied to list our common stock and Warrants on Nasdaq under the symbols “SQL” and “SQLLW,” respectively. No assurance can be given that such listing will be approved or that a liquid trading market will develop for either our common stock or Warrants.

The number of shares of our common stock to be outstanding after this offering is based on 4,864,862 shares of common stock outstanding as of March 31, 2021, the conversion of all outstanding shares of our Series A preferred stock, which has been consented to by a majority of the holders of such shares, into an aggregate of 3,130,622 shares of our common stock, and the conversion of outstanding indebtedness in the aggregate principal amount of \$2,141,730, which has been consented to by the holders of such indebtedness, into an aggregate of 641,895 shares of our common stock, which conversions will occur immediately prior to the closing of this offering, and excludes as of such date:

- 711,946 shares of our common stock issuable upon the exercise of warrants, at a weighted average exercise price of \$2.65 per share;
- 115,789 shares of our common stock that may be issued upon exercise of the Underwriters’ Warrants at an exercise price of \$5.22, which represents 5% of the shares of common stock being offered hereby and 110% of an assumed public offering price of \$4.75, which is the midpoint of the initial public offering price range reflected on the cover of this prospectus;
- 818,915 shares of our common stock issuable upon the exercise of outstanding stock options under our 2014 Equity Incentive Plan, with a weighted average exercise price of \$1.77 per share; and
- 262,166 shares of our common stock reserved for future issuance under our 2014 Equity Incentive Plan.

Unless otherwise stated, all information in this prospectus assumes no exercise of the underwriters’ over-allotment option to purchase additional shares of common stock or Warrants.

Summary Financial Data

	As of March 31, 2021		
	Actual	Pro Forma ⁽¹⁾	Pro Forma as Adjusted ⁽²⁾
Balance Sheet Data:			
Working capital	\$ (882,087)	\$ (882,087)	\$ 8,627,911
Total assets	623,567	623,567	10,133,565
Total liabilities	5,891,344	2,815,357	2,815,357
Total stockholders' equity (deficit)	(5,267,777)	(2,191,790)	7,318,208

(1) Gives effect to the conversion of all outstanding shares of our preferred stock into an aggregate of 3,130,622 shares of our common stock, the conversion of outstanding indebtedness in the aggregate principal amount of \$2,141,730 into an aggregate of 641,895 shares of our common stock, which conversions will occur immediately prior to the closing of this offering.

(2) Reflects, in addition to the pro forma adjustment set forth in footnote (1), the sale of 2,315,789 Units in this offering at an assumed initial public offering price of \$4.75 per Unit, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the 8% underwriting commission and estimated offering expenses payable by us of approximately \$610,000.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the following information about these risks, together with the other information appearing elsewhere in this prospectus, including our financial statements, the notes thereto and the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” before deciding to invest in our securities. The occurrence of any of the following risks could have a material and adverse effect on our business, reputation, financial condition, results of operations and future growth prospects, as well as our ability to accomplish our strategic objectives. As a result, the trading price of our securities could decline and you could lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations and stock price.

As we have incurred recurring losses and negative cash flows since our inception, there is no assurance that we will be able to continue as a going concern absent additional financing, which we may not be able to obtain on favorable terms or at all.

We have incurred net losses since our incorporation in 2014 and we cannot be certain if or when we will produce sufficient revenue from our operations to support our costs. Even if profitability is achieved in the future, we may not be able to sustain profitability on a consistent basis. We expect to continue to incur substantial losses and negative cash flow from operations for the foreseeable future. Our financial statements included with this prospectus have been prepared assuming that we will continue as a going concern. We have concluded that substantial doubt about our ability to continue as a going concern exists and our auditors have made reference to this in their audit report on our audited consolidated financial statements for the year ended December 31, 2020. As a result, it may be more difficult for us to attract investors. Our future is dependent upon our ability to obtain financing and upon future profitable operations from the sale of future sequencing products.

Our ability to obtain additional financing will be subject to a number of factors, including market conditions, our operating performance and investor sentiment. If we are unable to raise additional capital when required or on acceptable terms, we may have to significantly delay, scale back or discontinue our operations or obtain funds by entering into agreements on unattractive terms, which would likely have a material adverse effect on our business, stock price and our relationships with third parties with whom we have business relationships, at least until additional funding is obtained. If we do not have sufficient funds to continue operations, we could be required to seek bankruptcy protection or other alternatives that would likely result in our stockholders losing some or all of their investment in us.

We do not have any credit facilities as a source of future funds, and there can be no assurance that we will be able to raise sufficient additional capital on acceptable terms, or at all. We may seek additional capital through a combination of private and public equity offerings, debt financings and strategic collaborations. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing stockholders. Debt financing, if obtained, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, could increase our expenses and require that our assets secure such debt. Moreover, any debt we incur must be repaid regardless of our operating results.

We are an early, commercial-stage company with a limited operating history.

We were incorporated in 2014 and we have had limited sales to date. As such, we have limited historical financial data upon which to base our projected revenue, planned operating expenses or upon which to evaluate us and our commercial prospects. Based on our limited experience in developing and marketing our existing products and services as well as launching new products, we may not be able to effectively:

- drive adoption of our current and future products and services;
- attract and retain customers for our products and services;
- provide appropriate levels of customer training and support for our products and services;
- implement an effective marketing strategy to promote awareness of our products and services;

- develop, manufacture and commercialize new products or achieve an acceptable return on our manufacturing or research and development efforts and expenses;
- anticipate and adapt to changes in our market or predict future performance;
- accommodate customer expectations and demands with respect to our products and services;
- grow our market share by marketing and selling our products and services to new and additional market segments;
- maintain and develop strategic relationships with vendors and manufacturers to acquire necessary materials for the production of our existing or future products;
- adapt or scale our manufacturing activities to meet potential demand at a reasonable cost;
- avoid infringement and misappropriation of third-party intellectual property;
- obtain any necessary licenses to third-party intellectual property on commercially reasonable terms;
- obtain valid and enforceable patents that give us a competitive advantage;
- protect our proprietary technology; and
- attract, retain and motivate qualified personnel.

If our tSMS sequencing instruments or sequencing services fail to achieve and sustain sufficient market acceptance, we will not generate expected revenue and our business may not succeed.

We cannot be sure that our current or future tSMS sequencers or services will gain acceptance in the marketplace at levels sufficient to support our costs. We must successfully develop and commercialize our technology for use in a variety of life science and other applications. Even if we are able to implement our technology and develop products successfully, we and/or our sales and distribution partners may fail to achieve or sustain market acceptance of our products across the full range of our intended life science and other applications. Our sequencing instruments require sequencing kits in order to produce sequencing data at sufficient levels to generate expected revenue. We will have to increase our internal capabilities and to collaborate with other partners in order to successfully expand sales of our sequencing kits in the markets we seek to reach, which we may be unable to do at the scale required to support our business.

Our research and development efforts may not result in the benefits we anticipate, and our failure to successfully market, sell and commercialize our current and future sequencing instruments and services products could have a material adverse effect on our business, financial condition and results of operations.

We have dedicated significant resources to developing sequencing instruments and services. We are also engaged in substantial and complex research and development efforts, such as Direct RNA Sequencing (DRS™), single cell sequencing, biomarker discovery, and epigenetic modification detection, which, if successful, may result in the introduction of new products in the future. Our research and development efforts are complex and require us to incur substantial expenses. We may not be able to develop and commercialize new products, or achieve an acceptable return, if any, on our research and development efforts and expenses. There can also be no assurance that we will be able to develop and manufacture future sequencing instruments and applications as a result of our research and development efforts, or that we will be able to market, sell and commercialize the products that result from our research and development efforts. We will need to expand our internal capabilities and seek new partnerships or collaborations in order to successfully market, sell and commercialize the sequencing instruments and applications that we have developed in the markets we seek to reach.

The pioneer of our tSMS technology, Helicos Biosciences Corporation, was unable to successfully commercialize its tSMS product offerings and there can be no assurance that the business strategy that we have developed and are pursuing to commercialize our tSMS offerings will be successful.

Our tSMS technology has been in development since 2004 at Helicos Biosciences Corporation (“Helicos”), which pioneered the first generation tSMS technology resulting in its commercialization as the HeliScope Genetic Analysis System. Helicos was unable to successfully commercialize its product offerings and filed for protection under Chapter 11 of the United States Bankruptcy Code in 2012. In 2013, Daniel Jones, a former scientist at Helicos and our current Chief Executive Officer, formed our company to further the development of tSMS. We then purchased much of our physical assets from Helicos, including, among other items, sequencers, laboratory equipment, internal servers, protocols and data analysis procedures, through Helicos’ bankruptcy proceedings. While we believe we have developed and are pursuing a unique business strategy for our company that is distinguishable from the business strategy that was pursued by Helicos, there can be no assurance that our business strategy will be successful or that we will ultimately be profitable. If our current or future tSMS sequencers or services do not gain acceptance in the marketplace, our business and financial condition would be harmed and you could lose all or a portion of your investment in our securities.

If we are unable to successfully develop and timely manufacture our sequencing instruments and reagents, our business may be adversely affected.

In light of the highly-complex technologies involved in our sequencing products, including instruments and reagents, there can be no assurance that we will be able to manufacture and commercialize our new sequencing instruments and reagents on a timely basis or provide adequate support for such products. The commercial success of our sequencers and reagents depends on a number of factors, including performance and reliability, our anticipating and effectively addressing customer preferences and demands, the success of our sales and marketing efforts, effective forecasting and management of instrument and sequencing services demand, purchase commitments and inventory levels and effective management of manufacturing and supply costs. Our ability to manufacture benchtop sequencers and reagents could be negatively impacted by changes to personnel, hiring delays, resource availability, supply chain disruption or facilities disruption, and may be insufficient to achieve customer acceptance and growth.

The development of our sequencing instruments and reagents is complex and costly, requiring successful systems integration and reagent quality to generate usable data for customers and collaborators. Problems in the design or quality of our products may have a material and adverse effect on our brand, business, financial condition and operating results. Unanticipated problems with our products could divert substantial resources, which may impair our ability to support our new and existing products, and could substantially increase our costs. If we encounter development challenges or discover errors in our products late in our development cycle, we may be forced to delay product shipments or the scaling of manufacturing or supply. The expenses or losses associated with delayed or unsuccessful product development or lack of market acceptance of our new products could materially and adversely affect our business, financial condition and results of operations.

We must successfully manage new product introductions and transitions related to the tSMS technology, we may incur significant costs during these transitions, and they may not result in the benefits we anticipate.

The introduction of future products may lead to our limiting or ceasing development of further enhancements to our existing sequencing instruments and applications, as we focus our resources on new products, and could result in reduced marketplace acceptance and loss of sales of our existing sequencing instruments or sequencing services, which could materially adversely affect our revenue and operating results. The introduction of new products may also have a negative impact on our revenue in the near-term as our current and future customers may delay or cancel orders of existing sequencing instruments or sequencing services in anticipation of new products and we may also be pressured to decrease prices for our existing products. Further, we could experience difficulty in managing or forecasting customer reactions, purchasing decisions or transition requirements with respect to newly-launched sequencing instruments or sequencing services. We could incur significant costs in completing the transitions, including costs of inventory write-downs of our products, as current or future customers transition to the new products. If we do not successfully manage these product transitions, our business, reputation and financial condition may be materially and adversely affected.

Business or economic disruptions or global health concerns, including the novel coronavirus disease, or COVID-19, pandemic, may have an adverse impact on our business and results of operations.

The COVID-19 pandemic has negatively impacted the global economy, disrupted consumer spending and global supply chains, and created significant volatility and disruption of financial markets. Many countries around the world, including in the United States, have significant governmental measures being implemented to control the spread of the virus, including temporary closure of businesses, severe restrictions on travel and the movement of people, and other material limitations on the conduct of business. To date, the direct impact of the pandemic on our operations has been mainly limited to a temporary closure of our facility earlier in the year, in the context of a government-mandated general lockdown, which temporarily delayed certain of our development activities. We have implemented remote working and workplace protocols for our employees in accordance with government requirements. The extent of the impact of the COVID-19 pandemic on our business and financial performance, including our ability to execute our near-term and long-term business strategies and initiatives in the expected time frame, will depend on future developments, including the duration and severity of the pandemic and the impacts of reopening, including possible additional waves, which are uncertain and cannot be predicted.

We believe the COVID-19 pandemic has adversely affected our sales and results of operations during 2020 and the first quarter of 2021 and may continue to adversely affect our business due to the significant reductions of research grants made available during the pandemic, particularly for sequencing research and development that is not dedicated to COVID-19 related disorders. The initial target market for our instruments and research services has been the life sciences research and development market where we provide solutions for a variety of applications, including biomarker discovery and diagnostic assay developments. This market, which includes laboratories associated with universities, scientific research centers, government institutions, and biotechnology and pharmaceutical companies, often depends on research grants and donations for a significant portion of their funding, and the demand for our products in this customer segment has been affected by a reduction in their non-COVID-19 related research grants and may continue to be so affected in the future.

The COVID-19 pandemic has the potential to significantly impact our supply chain if the factories that manufacture our supplies or the operations of other service providers are disrupted, temporarily closed or experience worker shortages. We may also see disruptions or delays in shipments and increased prices of the supplies on which we rely for our operations.

As a result of the COVID-19 pandemic, including related governmental guidance or requirements, we may need to close our facilities, at least temporarily, or implement more restrictive policies to comply with social distancing rules and other requirements. As much of our research and development work requires on-site performance, such steps may negatively impact productivity and cause other disruptions to our business.

The full extent of the COVID-19 pandemic's impact on our business and results of operations depends on future developments that are uncertain and unpredictable, including the duration and spread of the pandemic, its lasting impact on capital and financial markets, including any economic recession, and any new information that may emerge concerning the severity of the virus, its spread to other regions as well as the actions taken to contain it, among others. At this point in time, we cannot reasonably estimate the full extent of the COVID-19 pandemic's impact on our business, financial condition, results of operations and cash flow.

Our future capital needs are uncertain and we may need to raise additional funds to support those needs.

We believe the net proceeds from this offering, together with our cash generated from commercial sales and research activity, will enable us to fund our operations for at least 24 months. However, we expect to seek significant future financing, namely to:

- expand our sales and marketing efforts to further commercialize our products and services;
- hire additional personnel;
- add operational, financial and management information systems;
- pay increased costs as a result of operating as a public company;
- lease additional laboratory space to accommodate expanded operations and increased human resources;

Table of Contents

- expand our research and development efforts to improve our product offerings and to successfully launch new products;
- enter into collaboration agreements, if any, or in-license other products and technologies; and
- seek FDA approval to market our existing products or new products that would be utilized for diagnostic purposes.

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

- market acceptance of our products;
- the cost and timing of establishing additional sales, marketing and distribution capabilities;
- the cost of our research and development activities;
- the success of our existing distribution and marketing arrangements and our ability to enter into additional arrangements in the future; and
- the effect of competing technological and market developments.

We cannot assure you that we will be able to obtain additional funds on acceptable terms, or at all. Our ability to obtain additional financing will be subject to market conditions, our operating performance and investor sentiment, among other factors. If we raise additional funds by issuing equity or equity-linked securities, our stockholders may experience dilution. Future debt financing, if available, may involve covenants restricting our operations or our ability to incur additional debt. Any debt or equity financing may contain terms that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products, or grant licenses on terms that are not favorable to us. If we do not have, or are not able to obtain, sufficient funds, we may have to delay development or commercialization of our products. We also may have to reduce marketing, customer support or other resources devoted to our products or cease operations. Any of these factors could have a material adverse effect on our financial condition, operating results and business.

We rely on other companies for certain components and materials and intend to outsource sub-assembly manufacturing in the future. We may not be able to successfully assemble or manufacture reagents and instruments or scale the manufacturing process necessary to build and test multiple products on a full commercial basis, which could materially harm our business.

Our products are complex and involve a large number of unique components, many of which require precision in manufacturing that is performed in-house using third-party components. The nature of our products requires significant use of customized components that are currently available only from a limited number of sources, and in some cases, single sources. If we are required to purchase these components from alternative sources, it could take several months or longer to qualify the alternative sources. If we are unable to secure a sufficient supply of these product components on a timely basis, or if these components do not meet our expectations or specifications for quality and functionality, our operations and manufacturing will be materially and adversely affected, we could be unable to meet customer demand and our business and results of operations may be materially and adversely affected.

The operations of our suppliers could be disrupted by conditions unrelated to our business or operations or that are beyond our control, including but not limited to international trade restrictions or changes resulting from factors beyond our control. If our suppliers are unable or fail to fulfill their obligations to us for any reason, we may not be able to manufacture our instruments or reagents and satisfy customer demand or our obligations under sales agreements in a timely manner, and our business could be harmed as a result. Our current manufacturing process is characterized by long lead times between the placement of orders for and delivery of our products. If we have received insufficient components to manufacture our products on a timely basis to meet customer demand, our sales and our gross margin may be adversely affected, and our business could be materially harmed. If we are unable to reduce our manufacturing costs and establish and maintain reliable, high-volume manufacturing suppliers as we scale our operations, our business could be materially harmed.

We may be unable to consistently manufacture our instruments and reagents to the necessary specifications or in quantities necessary to meet demand at an acceptable cost.

In order to successfully generate revenue from our products, we need to supply our customers with products that meet their expectations relating to read length, error rates and data yield in accordance with established specifications. There is no assurance that we will be able to manufacture our products so that they consistently achieve the product specifications and quality that our customers expect, including any products developed for clinical uses. Problems in the design or quality of our products may have a material adverse effect on our brand, business, financial condition, and operating results. There is also no assurance that we will be able to increase manufacturing output and decrease costs, or that we will be successful in forecasting customer demand or manufacturing and supply costs. Furthermore, we may not be able to increase manufacturing to meet anticipated demand or may experience downtime in our existing or new manufacturing facilities. An inability to manufacture sequencing instruments and reagents or provide sequencing services, that consistently meet specifications, in necessary quantities and at commercially acceptable costs, will have a negative impact, and may have a material adverse effect, on our business, financial condition and results of operations.

Rapidly-changing technology in life sciences and diagnostics could make our technology obsolete unless we continue to develop and commercialize new and improved products and pursue new market opportunities.

The biotechnology industry is characterized by rapid and significant technological changes, frequent new product introductions and enhancements and evolving industry standards. Our future success will depend on our ability to continually improve our products, to develop and introduce new products that address the evolving needs of our customers on a timely and cost-effective basis and to pursue new market opportunities. These new market opportunities may be outside the scope of our proven expertise or in areas where the market demand is unproven, and new products and services developed by us may not gain market acceptance. Our inability to develop and introduce new products and to gain market acceptance of such products could harm our future operating results. Unanticipated difficulties or delays in replacing existing products with new products or other new or improved products in sufficient quantities to meet customer demand could diminish future demand for our products and harm our future operating results.

Increased market adoption of our products by customers may depend on the availability of sample preparation and informatics tools, some of which may be developed by third parties.

Our commercial success may depend in part upon the development of sample preparation and software by third parties for use with our sequencing and data analysis workflow. We cannot guarantee that third parties will develop tools that our current and future customers will find useful with our sequencing instruments given that our sample preparation methods are uniquely tailored to single molecule sequencing. Similarly, as our sequencing methodology does not require amplification and bridge PCR, the downstream data analysis tools required for informatics analysis are specialized. A lack of complementary sample preparation options and software to enable broader usability may impede the adoption of our technology and may materially and adversely impact our business.

We operate in a highly-competitive industry and if we are not able to compete effectively, our business and operating results will likely be harmed.

Some of our current competitors, including Illumina, Inc., Pacific Bioscience of California, Inc., Thermo Fisher Scientific Inc., and Beijing Genomic Institute as well as other potential competitors, have greater name recognition, more substantial intellectual property portfolios, longer operating histories, significantly greater financial, technical, research and/or other resources, more experience in new product development, larger and more established manufacturing capabilities and marketing, sales and support functions, and/or more established distribution channels to deliver products to customers than we do. These competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards or customer requirements. In light of these advantages, even if our technology is more effective than the products or service offerings of our competitors, current and potential customers might purchase competitive products and services instead of our products. There are also several companies that are in the process of developing or have already developed new, potentially competing technologies, products and/or services. Increased competition may result

in pricing pressures, which could harm our sales, profitability or market share. Our failure to further enhance our existing products and to introduce new products to compete effectively could materially and adversely affect our business, financial condition or results of operations.

Single molecule sequencers are highly complex, have recurring support requirements and could have unknown defects or errors, which may give rise to claims against us or divert application of our resources from other purposes.

Products using our technology are highly complex and may develop or contain undetected defects or errors. Despite testing, defects or errors may arise in our products, which could result in a failure to maintain or increase market acceptance of our products, diversion of development resources, injury to our reputation and increased warranty, service and maintenance costs. New products or enhancements to our existing products in particular may contain undetected errors or performance problems that are discovered only after delivery to customers. If our products have reliability or other quality issues or require unexpected levels of support in the future, the market acceptance and utilization of our products may not grow to levels sufficient to support our costs and our reputation and business could be harmed. We generally ship our sequencing instruments with one year of service included in the purchase price with an option to purchase one or more additional years of service. We also provide a warranty for our sequencing kits, which is generally limited to replacing, or at our option, giving credit for any sequencing kit with defects in material or workmanship. Defects or errors in our products may also discourage customers from purchasing our products. The costs incurred in correcting any defects or errors may be substantial and could materially and adversely affect our operating margins. If our service and support costs increase, our business and operations may be materially and adversely affected.

In addition, such defects or errors could lead to the filing of product liability claims against us or against third parties who we may have an obligation to indemnify against such claims, which could be costly and time-consuming to defend and result in substantial damages. Although we have product liability insurance, any product liability insurance that we have or procure in the future may not protect our business from the financial impact of a product liability claim. Moreover, we may not be able to obtain adequate insurance coverage on acceptable terms. Any insurance that we have or obtain will be subject to deductibles and coverage limits. A product liability claim could have a serious adverse effect on our business, financial condition and results of operations.

We depend on the continuing efforts of our senior management team and other key personnel. If we lose members of our senior management team or other key personnel or are unable to successfully retain, recruit and train qualified scientists, engineers and other personnel, our ability to maintain and develop our products could be harmed and we may be unable to achieve our goals.

Our future success depends upon the continuing services of members of our senior management team and scientific and engineering personnel. We compete for qualified management and scientific personnel with other life science companies, academic institutions and research institutions, particularly those focusing on genomics. If one or more of our senior executives or other key personnel is unable or unwilling to continue in their present positions, we may not be able to replace them easily or at all, and other senior management may be required to divert attention from other aspects of the business. In addition, we do not have “key person” life insurance policies covering any member of our management team or other key personnel. The loss of any of these individuals or our inability to attract or retain qualified personnel, including scientists, engineers and others, could prevent us from pursuing collaborations and materially and adversely affect our support of existing products, product development and introductions, business growth prospects, results of operations and financial condition.

A significant portion of our potential sales depends on customers’ spending budgets that may be subject to significant and unexpected variation which could have a negative effect on the demand for our products.

Our instruments represent significant capital expenditures for our customers. Potential customers for our current or future products include academic and government institutions, genome centers, medical research institutions, clinical laboratories, pharmaceutical, agricultural, biotechnology, diagnostic and chemical companies. Their spending budgets can have a significant effect on the demand for our products. Spending budgets are based on a wide variety of factors, including the allocation of available resources to make purchases, funding from government sources which is highly uncertain and subject to change, the spending priorities among various types of research equipment and policies regarding capital expenditures during economically uncertain periods. Any decrease

in capital spending or change in spending priorities of our current and potential customers could significantly reduce the demand for our products. Any delay or reduction in purchases by potential customers or our inability to forecast fluctuations in demand could harm our future operating results.

Delivery of our reagents could be delayed or disrupted by factors beyond our control, and we could lose customers as a result.

We rely on third-party carriers for the timely delivery of our products both domestically and internationally. As a result, we are subject to carrier disruptions and increased costs that are beyond our control. Any failure to deliver products to our customers in a safe and timely manner may damage our reputation and brand and could cause us to lose customers. If our relationship with any of these third-party carriers is terminated or impaired or if any of these carriers are unable to deliver our products, the delivery and acceptance of our products by our customers may be delayed, which could harm our business and financial results. Specific reagents utilized in our sequencing reactions are temperature-sensitive and are required to be kept and stored in a temperature-controlled method in order to properly ship. In addition, many of the raw materials used during the manufacturing process of our reagents require temperature control during shipment. The failure to deliver our products in a safe, temperature-controlled, and timely manner may harm our relationship with our customers, increase our costs and otherwise disrupt our operations.

We are, and may become, subject to governmental regulations that may impose burdens on our operations, and the markets for our products may be narrowed.

We are subject, both directly and indirectly, to the adverse impact of government regulation of our operations and markets. Moreover, the life sciences industry, which is expected to be one of the primary markets for our technology, has historically been heavily regulated. There are, for example, laws in several jurisdictions restricting research in genetic engineering, which may narrow our markets. At a minimum, biosafety regulations enforced by local government must be followed and updated should new regulations pass the approval process. Given the evolving nature of this industry, legislative bodies or regulatory authorities may adopt additional regulations that may adversely affect our market opportunities. Additionally, if ethical and other concerns surrounding the use of genetic information, diagnostics or therapies become widespread, there may be less demand for our products.

Our business is also directly affected by a wide variety of government regulations applicable to business enterprises generally and to companies operating in the life science industry in particular. Failure to comply with government regulations or obtain or maintain necessary permits and licenses could result in a variety of fines or other censures or an interruption in our business operations which may have a negative impact on our ability to generate revenue and the cost of operating our business. In addition, changes to laws and government regulations could cause a material adverse effect on our business as we will need to adapt our business to comply with such changes.

Our products could become subject to regulation by the U.S. Food and Drug Administration or other domestic and international regulatory agencies, which could increase our costs and impede or delay our commercialization efforts, thereby materially and adversely affecting our business and results of operations.

Our products are not currently subject to the FDA clearance or approval since they are not intended for use in the diagnosis or treatment of disease. However, in the future, certain of our products or related applications, such as those that may be developed for clinical uses, could be subject to FDA regulation, or the FDA's regulatory jurisdiction could be expanded to include our products. Even where a product is exempted from FDA clearance or approval, the FDA may impose restrictions as to the types of customers to which we or our partners can market and sell our products. Such regulation and restrictions may materially and adversely affect our business, financial condition and results of operations. In the event that we fail to obtain and maintain necessary regulatory clearances or approvals for products that we develop for clinical uses, or if clearances or approvals for future products and indications are delayed or not issued, our commercial operations may be materially harmed. Furthermore, even if we are granted regulatory clearances or approvals, they may include significant limitations on the indicated uses for the product, which may limit the market for the product. We do not have experience in obtaining FDA approvals and no assurance can be given that we will be able to obtain or to maintain such approvals. Furthermore, any approvals that we may obtain can be revoked if safety or efficacy problems develop.

Due to material weakness in our internal controls, our ability to produce accurate financial statements on a timely basis could be impaired, which would adversely affect our business and our stock price.

Ensuring that we have adequate internal financial and accounting controls and procedures in place to produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be evaluated frequently. We may in the future discover areas of our internal financial and accounting controls and procedures that need improvement. Operating as a public company requires sufficient resources within the accounting and finance functions in order to produce timely financial information, ensure the level of segregation of duties, and maintain adequate internal control over financial reporting customary for a U.S. public company.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States (U.S. GAAP). Our management does not expect that our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within our company will have been detected.

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

Under Section 382 of the Internal Revenue Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating losses ("NOLs") to offset future taxable income. Significant changes in our stock ownership could result in us being unable to utilize a material portion of our NOLs even if we attain profitability.

Our sales cycle is unpredictable and lengthy, which makes it difficult to forecast revenue and may increase the magnitude of quarterly or annual fluctuations in our operating results.

The sales cycle for our sequencing instruments is lengthy because our products represent a major capital expenditure and generally require the approval of our customers' senior management. This may contribute to substantial fluctuations in our quarterly or annual operating results, particularly during the periods in which our sales volume is low. Factors that may cause fluctuations in our quarterly or annual operating results include, without limitation:

- market acceptance for our products;
- our ability to attract new customers;
- publications of studies by us, competitors or third parties;
- the timing and success of new product introductions by us or our competitors or other changes in the competitive dynamics of our industry, such as consolidation;
- the amount and timing of our costs and expenses;
- general economic, industry and market conditions;
- changes in our pricing policies or those of our competitors;
- the regulatory environment;
- expenses associated with warranty costs or unforeseen product quality issues;
- the hiring, training and retention of key employees, including our ability to grow our sales organization;
- litigation or other claims against us for intellectual property infringement or otherwise;
- our ability to obtain additional financing as necessary; and
- changes or trends in new technologies and industry standards.

Because of these fluctuations, it is likely that in some future quarters our operating results will fall below the expectations of securities analysts or investors.

Our operations involve the use of hazardous materials, and we must comply with environmental, health and safety laws, which can be expensive and may adversely affect our business, operating results and financial condition.

Our research and development and manufacturing activities involve the use of hazardous materials, including chemicals and biological materials. Our sequencing reagents, such as tris (2-carboxyethyl) phosphine and acetonitrile, include hazardous materials. Accordingly, we are subject to federal, state, local and foreign laws, regulations and permits relating to environmental, health and safety matters, including, among others, those governing the use, storage, handling, exposure to and disposal of hazardous materials and wastes, the health and safety of our employees, and the shipment, labelling, collection, recycling, treatment and disposal of products containing hazardous materials. Liability under environmental laws and regulations can be joint and several and without regard to fault or negligence. For example, under certain circumstances and under certain environmental laws, we could be held liable for costs relating to contamination at our or our predecessors' past or present facilities and at third-party waste disposal sites. We could also be held liable for damages arising out of human exposure to hazardous materials. There can be no assurance that violations of environmental, health and safety laws will not occur as a result of human error, accident, equipment failure or other causes. The failure to comply with past, present or future laws could result in the imposition of substantial fines and penalties, remediation costs, property damage and personal injury claims, investigations, the suspension of production or product sales, the loss of permits or a cessation of operations. Any of these events could harm our business, operating results and financial condition. We also expect that our operations will be affected by new environmental, health and safety laws and regulations on an ongoing basis, or more stringent enforcement of existing laws and regulations. New laws or changes to existing laws may result in additional costs and may increase penalties associated with violations or require us to change the content of our products or how we manufacture them, which could have a material adverse effect on our business, operating results and financial condition.

Ethical, legal, privacy and social concerns or governmental restrictions surrounding the use of genetic information could reduce demand for our technology.

Our products may be used to provide genetic information about humans and other living organisms. The information obtained from our products could be used in a variety of applications that may have underlying ethical, legal, privacy and social concerns, including the genetic engineering or modification of agricultural products or testing for genetic predisposition for certain medical conditions. Governmental authorities could, for safety, social or other purposes, call for limits on or regulation of the use of genetic testing. Such concerns or governmental restrictions could limit the use of our products, which could have a material adverse effect on our business, financial condition and results of operations.

Disruption of critical information technology systems or material breaches in the security of our systems could harm our business, customer relations and financial condition.

Information technology ("IT") helps us to operate efficiently, interface with customers, maintain financial accuracy and efficiently and accurately produce our financial statements. IT systems are used extensively in virtually all aspects of our business, including sales forecast, order fulfilment and billing, customer service, logistics, and management of data from running samples on our products. Our success depends, in part, on the continued and uninterrupted performance of our IT systems. IT systems may be vulnerable to damage from a variety of sources, including telecommunications or network failures, power loss, natural disasters, human acts, computer viruses, computer denial-of-service attacks, unauthorized access to customer or employee data or company trade secrets, and other attempts to harm our systems. Certain of our systems are not redundant, and our disaster recovery planning is not sufficient for every eventuality. Despite any precautions we may take, such problems could result in, among other consequences, disruption of our operations, which could harm our reputation and financial results.

If we do not allocate and effectively manage the resources necessary to build and sustain the proper IT infrastructure, we could be subject to transaction errors, processing inefficiencies, loss of customers, business disruptions or loss of or damage to intellectual property through security breach. If our data management systems do not effectively collect, store, process and report relevant data for the operation of our business, whether due to equipment malfunction or constraints, software deficiencies or human error, our ability to effectively plan, forecast and execute our business plan and comply with applicable laws and regulations will be impaired, perhaps materially. Any such impairment could materially and adversely affect our reputation, financial condition, results of operations, cash flows and the timeliness with which we report our internal and external operating results.

Security breaches and other disruptions could compromise our information and expose us to liability, which would cause our business and reputation to suffer.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, our proprietary business information and that of our customers, suppliers and business partners, and personally identifiable information of our employees, on our networks. The secure processing, maintenance and transmission of this information is critical to our operations. Despite our security measures, our IT infrastructure may be vulnerable to attacks by hackers, computer viruses, malicious codes, unauthorized access attempts, and cyber- or phishing-attacks, or breached due to employee error, malfeasance, faulty password management or other disruptions. Third parties may attempt to fraudulently induce employees or other persons into disclosing user names, passwords or other sensitive information, which may in turn be used to access our IT systems, commit identity theft or carry out other unauthorized or illegal activities. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, disruption of our operations and damage to our reputation, which could divert our management's attention from the operation of our business and materially and adversely affect our business, revenues and competitive position. Moreover, we may need to increase our efforts to train our personnel to detect and defend against cyber- or phishing-attacks, which are becoming more sophisticated and frequent, and we may need to implement additional protective measures to reduce the risk of potential security breaches, which could cause us to incur significant additional expenses.

We are subject to certain U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations. We can face serious consequences for violations.

Among other matters, U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions, and other trade laws and regulations, which are collectively referred to as Trade Laws, prohibit companies and their employees, agents, clinical research organizations, legal counsel, accountants, consultants, contractors, and other partners from authorizing, promising, offering, providing, soliciting or receiving, directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Violations of Trade Laws can result in substantial criminal fines and civil penalties, imprisonment, the loss of trade privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We also expect our non-U.S. activities to increase in time. We plan to engage third parties for collaborations, sales and distribution of sequencing products and we can be held liable for the corrupt or other illegal activities of our personnel, agents, or partners, even if we do not explicitly authorize or have prior knowledge of such activities.

Risks Related to Our Intellectual Property

Failure to secure patent or other intellectual property protection for our products and improvements to our products may reduce our ability to maintain any technological or competitive advantage over our current and potential competitors.

Our ability to protect and enforce our intellectual property rights is uncertain and depends on complex legal and factual questions. Our ability to establish or maintain a technological or competitive advantage over our competitors may be diminished because of these uncertainties. For example:

- we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications or issued patents;
- we or our licensors might not have been the first to file patent applications for these inventions;
- the scope of the patent protection we or our licensors obtain may not be sufficiently broad to prevent others from practicing our technologies, developing competing products, designing around our patented technologies or independently developing similar or alternative technologies;
- our and our licensors' patent applications or patents have been, are and may in the future be, subject to interference, opposition or similar administrative proceedings, which could result in those patent applications failing to issue as patents, those patents being held invalid or the scope of those patents being substantially reduced;

- the current assignee of our intellectual property may elect to forego paying maintenance fees, placing us at risk to lose the licensed IP, or the assignee may neglect to enforce the intellectual property we license from them;
- we or our partners may not adequately protect our trade secrets;
- we may not develop additional proprietary technologies that are patentable; or
- the patents of others may limit our freedom to operate and prevent us from commercializing our technology in accordance with our plans.

The occurrence of any of these events could impair our ability to operate without infringing upon the proprietary rights of others or prevent us from establishing or maintaining a competitive advantage over our competitors.

The intellectual property that is important to our business is owned by other companies or institutions and licensed to us, and changes to the rights we have licensed may adversely impact our business.

We license the intellectual property that is important to our business from Fluidigm Corporation (“Fluidigm”) (which obtained this intellectual property portfolio from Helicos Biosciences Corporation (“Helicos”)) pursuant to a non-exclusive licensing agreement. If we fail to comply with the terms of the license, Fluidigm could terminate the license. If these third parties who license intellectual property to us fail to maintain the intellectual property that we have licensed, or lose rights to that intellectual property, the rights we have licensed may be reduced or eliminated, which could subject us to claims of intellectual property infringement. Termination of our license from Fluidigm or reduction or elimination of our licensed rights may result in our having to negotiate new or reinstated licenses with less favorable terms, or could subject us to claims of intellectual property infringement in litigation or other administrative proceedings that could result in damage awards against us and injunctions that could prohibit us from selling our products. In addition, our license agreement from Fluidigm is non-exclusive and Fluidigm may license the technology to our competitors, which may result in significant competition for us.

In addition, we have limited rights to participate in the prosecution and enforcement of the patents and patent applications that we have licensed. As a result, we cannot be certain that these patents and applications will be prosecuted and enforced in a manner consistent with the best interests of our business. Further, because of the rapid pace of technological change in our industry, we may need to rely on key technologies developed or licensed by third parties, and we may not be able to obtain licenses and technologies from these third parties at all or on reasonable terms. The occurrence of these events may have a material adverse effect on our business, financial condition or results of operations.

A license agreement for intellectual property that is important to our business may be terminated in the event that Daniel Jones, our Chief Executive Officer, fails to continue to work full time for us.

As discussed above, we license certain intellectual property that is important to our business from Fluidigm (which obtained this intellectual property portfolio from Helicos) pursuant to a non-exclusive licensing agreement. The license agreement provides that Fluidigm has a right to terminate the license in the event Daniel Jones, our Chief Executive Officer, fails to continue to work full time for us. If we lose our rights to such intellectual property, the rights we have licensed may be reduced or eliminated, which could subject us to claims of intellectual property infringement, require us to cease selling certain or all of our products, negotiate less favorable agreements or otherwise result in a loss of business. In addition, such language could prevent us from terminating Mr. Jones from his position when it would otherwise be favorable for stockholders or our business in general.

Our licensed intellectual property and future intellectual property will have limited window of enforcement.

Our licensed intellectual property and future intellectual property will have limited windows of enforcement. Substantially all of our licensed IP is expected to expire between 2021 and 2028, excluding any extension or adjustment of patent terms that may be available. Following the expiration and termination of the patents relating to our licensed technology, we may face the development of similar technology from our competitors or other market participants, which could impede our revenue and growth.

We may not be able to protect intellectual property and proprietary rights worldwide.

The majority of our intellectual property is licensed from third parties through non-exclusive license agreements. Although our company has accumulated trade secrets and know-how to make this technology work effectively and reliably over the last decade, other entities may attempt to commercialize this technology by gaining access to the intellectual property. As a result, we may encounter additional competition from third parties, and may require significant amounts of time and resources to protect our intellectual property and proprietary rights.

Filing, prosecuting and defending patents on our products and other technologies in all countries throughout the world would be cost prohibitive, and the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but enforcement is not as strong as that in the United States. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

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

Intellectual property laws, and patent laws and regulations in particular, have been subject to significant variability either through administrative or legislative changes to such laws or regulations or changes or differences in judicial interpretation, and it is expected that such variability will continue to occur. Additionally, intellectual property laws and regulations differ by country. Variations in the patent laws and regulations or in interpretations of patent laws and regulations in the United States and other countries may diminish the value of our intellectual property and may change the impact of third-party intellectual property on us. Accordingly, we cannot predict the scope of the patents that may be granted to us with certainty, the extent to which we will be able to enforce our patents against third parties or the extent to which third parties may be able to enforce their patents against us.

If the scope of any patent protection we obtain is not sufficiently broad, or if we lose any of our patent protection, our ability to prevent our competitors from commercializing similar or identical sequencing technology and applications would be adversely affected.

The patent position of biotechnology companies generally is highly uncertain, involves complex legal and factual questions, and has been the subject of much litigation in recent years. As a result, the issuance, scope, validity, enforceability, and commercial value of our patent rights are highly uncertain. Our owned or in-licensed pending and future patent applications may not result in patents being issued which protect our tSMS platform, or other technologies or which effectively prevent others from commercializing competitive technologies and applications.

Our ability to stop third parties from making, using, selling, offering to sell, or importing products that infringe our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions and improvements. With respect to both licensed and company-owned intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our products and the methods used to manufacture those products. Moreover, even our issued patents do not guarantee us the right to

practice our technology in relation to the commercialization of our products. The area of patent and other intellectual property rights in biotechnology is an evolving one with many risks and uncertainties, and third parties may have blocking patents that could be used to prevent us from commercializing our sequencing instruments and practicing our proprietary technology. Our issued patent and those that may be issued in the future may be challenged, invalidated, or circumvented, which could limit our ability to stop competitors from marketing related products or limit the length of the term of patent protection that we may have for our technology. In addition, the rights granted under any issued patents may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies. For these reasons, we may have competition for our products. Moreover, because of the extensive time required for development and testing of new sequencing instruments, it is possible that, before any particular product can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent.

Moreover, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance. Even if patent applications we own or license issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us, or otherwise provide us with any competitive advantage. Any patents that we own or in-license may be challenged, narrowed, circumvented or invalidated by third parties. Consequently, we do not know whether our tSMS platform or other technologies will be protectable or remain protected by valid and enforceable patents. Our competitors or other third parties may be able to circumvent our patents by developing similar or alternative technologies or products in a non-infringing manner which could materially adversely affect our business, financial condition, results of operations and prospects.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and patents that we own or license may be challenged in the courts or patent offices in the United States and abroad. We or our licensors may be subject to a third-party reissuance submission of prior art to the U.S. Patent and Trademark Office (“USPTO”) or to foreign patent authorities or become involved in opposition, derivation, revocation, re-examination, post-grant and *inter partes* review, or interference proceedings or other similar proceedings challenging our owned or licensed patent rights. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate or render unenforceable, our owned or in-licensed patent rights, allow third parties to commercialize our tSMS platform technologies or other technologies and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. Moreover, we, or one of our licensors, may have to participate in interference proceedings declared by the USPTO to determine priority of invention or in post-grant challenge proceedings, such as oppositions in a foreign patent office, that challenge our or our licensor’s priority of invention or other features of patentability with respect to our owned or in-licensed patents and patent applications. Such challenges may result in loss of patent rights, loss of exclusivity, or in patent claims being narrowed, invalidated, or held unenforceable, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our tSMS Platform and other technologies. Such proceedings also may result in substantial cost and require significant time from our scientists and management, even if the eventual outcome is favorable to us.

We may in the future co-own patent rights relating to future sequencing instruments, reagents, applications, or our tSMS platform with third parties. Some of our in-licensed patent rights are, and may in the future be, co-owned with third parties. In addition, our licensors may co-own the patent rights we in-license with other third parties with whom we do not have a direct relationship.

We could in the future be subject to legal proceedings with third parties who may claim that our products infringe or misappropriate their intellectual property rights.

Our products are based on complex, rapidly-developing technologies. We may not be aware of issued or previously-filed patent applications that belong to third parties that mature into issued patents that cover some aspect of our products or their use. In addition, because patent litigation is complex and the outcome inherently uncertain, our belief that our products do not infringe third-party patents of which we are aware or that such third-party patents are invalid and unenforceable may be determined to be incorrect. As a result, third parties have claimed, and may in the future claim, that we infringe their patent rights and have filed, and may in the future file, lawsuits or engage in other proceedings against us to enforce their patent rights. In addition, as we enter new markets, our competitors and other third parties may claim that our products infringe their intellectual property rights as part of a business

strategy to impede our successful entry into those markets. Furthermore, parties making claims against us may be able to obtain injunctive or other relief, which effectively could block our ability to develop further, commercialize, or sell products or services, and could result in the award of substantial damages against us. Patent litigation between competitors in our industry is common. In defending ourselves against any of these claims, we could in the future incur, substantial costs, and the attention of our management and technical personnel could be diverted. We may be unable to modify our products so that they do not infringe the intellectual property rights of third parties. In some situations, the results of litigation or settlement of claims may require us to cease allegedly infringing activities, which could prevent us from selling some or all of our products. The occurrence of these events may have a material adverse effect on our business, financial condition or results of operations.

In addition, in the course of our business, we may from time to time have access or be alleged to have access to confidential or proprietary information of others, which, though not patented, may be protected as trade secrets. Others could bring claims against us asserting that we improperly used their confidential or proprietary information, or that we misappropriated their technologies and incorporated those technologies into our products. A determination that we illegally used the confidential or proprietary information or misappropriated technologies of others in our products could result in us paying substantial damage awards or being prevented from selling some or all of our products, which could materially and adversely affect our business.

We have not yet registered some of our trademarks in all of our potential markets, and failure to secure those registrations could adversely affect our business.

While we believe our trademarks are registered in the markets in which we currently operate, some of our trademark applications may not be allowed for registration in markets in which we may seek to enter in the future, and our registered trademarks may not be maintained or enforced. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose new or pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings.

Risks Related to our Collaborations with Third Parties

Our future collaborations may be important to our business. If we are unable to maintain any of these collaborations, or if these collaborations are not successful, our business could be adversely affected

We have limited capabilities for technology development, sales, marketing or distribution. Accordingly, we may enter into collaborations with academic and commercial entities to provide us with important technologies and funding for our programs and technology, and we may receive additional technologies and funding under these and other collaborations in the future. Any future collaborations we enter into may pose a number of risks, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any platform or may elect not to continue or renew development or commercialization programs or license arrangements based on changes in the collaborators' strategic focus or available funding, or external factors, such as a strategic transaction that may divert resources or create competing priorities;
- collaborators may provide insufficient funding for the research program;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our sequencing instruments and applications if the collaborators believe that the competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- biomarkers discovered by our collaborators in collaboration with us may be viewed by our collaborators as competitive with their own products, which may cause collaborators to cease to devote resources to the commercialization of our product;

Table of Contents

- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or terminations of the research, development or commercialization of new products or platforms, might lead to additional responsibilities for us with respect to technology development, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- if a collaborator of ours is involved in a business combination, the collaborator might deemphasize or terminate the development or commercialization of any product licensed to it by us; and
- collaborations may be terminated by the collaborator, and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable sequencing technology.

If our potential future collaborations do not result in the successful discovery, development and commercialization of products or if one of our collaborators terminates its agreement with us, we may not receive any future research funding or milestone potential payments under the collaboration. If we do not receive the funding we expect under these agreements, our development of our technology and applications could be delayed and we may need additional resources to develop products and our technology. All of the risks relating to product development, regulatory approval and commercialization described in this prospectus also apply to the activities of our therapeutic collaborators.

Additionally, if one of our potential future collaborators terminates its agreement with us, we may find it more difficult to attract new collaborators and our perception in the business and financial communities could be adversely affected.

Risks Related to this Offering and Ownership of Our Common Stock and Warrants

The market price of our common stock and Warrants may be highly volatile, and you could lose all or part of your investment.

Prior to this offering, there was no public market for the shares of our common stock or the Warrants. The offering price for the Units sold in this offering will be determined by negotiation between the underwriters and us. This price may not reflect the market price of our common stock or Warrants following this offering. As a result, the trading price of our common stock and Warrants is likely to be volatile, which may prevent you from being able to sell your shares or Warrants at or above the public offering price. Our prices of our common stock or Warrants could be subject to wide fluctuations in response to a variety of factors, which include:

- actual or anticipated fluctuations in our financial condition and operating results;
- announcements of technological innovations by us or our competitors;
- announcements by our customers, partners or suppliers relating directly or indirectly to our products, services or technologies;
- overall conditions in our industry and market;
- addition or loss of significant customers;
- changes in laws or regulations applicable to our products;
- actual or anticipated changes in our growth rate relative to our competitors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures, capital commitments or achievement of significant milestones;

Table of Contents

- additions or departures of key personnel;
- competition from existing products or new products that may emerge;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- disputes or other developments related to proprietary rights, including patents, litigation matters or our ability to obtain intellectual property protection for our technologies;
- announcement or expectation of additional financing efforts;
- sales of our common stock or Warrants by us or our stockholders;
- stock price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- reports, guidance and ratings issued by securities or industry analysts; and
- general economic and market conditions.

If any of the forgoing occurs, it would cause our stock and Warrant prices or trading volume to decline. Stock markets in general and the market for companies in our industry in particular have experienced price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our common stock or Warrants. You may not realize any return on your investment in us and may lose some or all of your investment.

We may be subject to securities litigation, which is expensive and could divert our management's attention.

The market price of our securities may be volatile, and in the past companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

We have broad discretion in the use of the net proceeds from this offering and may invest or spend the proceeds in ways with which you disagree or that may not yield a return.

While we set forth our anticipated use for the net proceeds from this offering in the section titled "Use of Proceeds," our management will have broad discretion on how to use and spend any proceeds that we receive from this offering and may use the proceeds in ways that differ from the anticipated uses set forth in this prospectus. Investors in this offering will need to rely upon the judgment of our management with respect to the use of proceeds with only limited information concerning management's specific intentions. It is possible that we may decide in the future not to use the proceeds of this offering in the manner described in this offering. Our management may spend a portion or all of the net proceeds from this offering in ways that holders of our common stock may not desire or that may not yield a significant return or any return at all. Investors will receive no notice or vote regarding any such change and may not agree with our decision on how to use such proceeds. If we fail to utilize the proceeds we receive from this offering effectively, our business and financial condition could be harmed, and we may need to seek additional financing sooner than expected. Pending their use, we may also invest the net proceeds from this offering in a manner that does not produce income or that loses value.

There is no existing market for our common stock and Warrants and we do not know if one will develop to provide you with adequate liquidity.

Prior to this offering, there has not been a public market for our common stock or Warrants. Although we have applied to have our common stock and Warrants listed on the Nasdaq, an active trading market for our common stock and Warrants may never develop or be sustained following this offering. You may not be able to sell your shares or Warrants quickly or at the market price if trading in our common stock and Warrants is not active. The initial public offering price for the Units will be determined by negotiations between us and the underwriters and may not be indicative of prices of our common stock or Warrants that will prevail in the trading market. You may

not be able to sell your shares of our common stock or Warrants at or above the price you paid in the offering. As a result, you could lose all or part of your investment. Further, an inactive market may also impair our ability to raise capital by selling shares of our common stock or Warrants and may impair our ability to enter into strategic partnerships or acquire companies or products by using our shares of common stock as consideration.

Our directors, executive officers and principal stockholders will continue to have substantial control over our company after this offering, which could limit your ability to influence the outcome of key transactions, including a change of control.

Upon completion of this offering, our executive officers, directors and principal stockholders and their affiliates will own 7,504,252 shares of our common stock, or approximately 68.5% of the outstanding shares of our common stock, based on the number of shares outstanding as of the date of this prospectus and assuming the sale of 2,315,789 Units in this offering at an assumed initial public offering price of \$4.75 per Unit, which is the midpoint of the price range set forth on the cover page of this prospectus, and underwriters' over-allotment option is not exercised. Such number of shares could increase to up to 7,820,042 shares, and such percentage could be approximately 71.4%, if St. Laurent Investments, LLC, one of our principal stockholders, or its affiliates purchase an aggregate of \$1.5 million of Units in this offering at the assumed initial offering price of \$4.75 per Unit, as it has indicated it has an interest in doing, but as to which there can be no assurance. As a result, these stockholders will be able to exercise a significant level of control over all matters requiring stockholder approval, including the election of directors and the approval of mergers, acquisitions or other extraordinary transactions. They may also have interests that differ from yours and may vote in a way with which you disagree and which may be adverse to your interests. This concentration of ownership may have the effect of delaying, preventing or deterring a change of control of our company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and might ultimately affect the market price of our common stock.

Our failure to meet the continued listing requirements of Nasdaq could result in de-listing of our common stock and Warrants.

If, after listing, we fail to satisfy the continued listing requirements of Nasdaq, such as the corporate governance requirements or the minimum closing bid price requirement, Nasdaq may take steps to de-list our common stock and Warrants. Such a de-listing would likely have a negative effect on the price of our common stock and Warrants and would impair your ability to sell or purchase our common stock and Warrants when you wish to do so. In the event of a de-listing, we would take actions to try to restore our compliance with Nasdaq Marketplace Rules, but our common stock and Warrants may not be listed again, and such actions may not stabilize the market price or improve the liquidity of our common stock or Warrants, prevent our common stock or Warrants from dropping below the Nasdaq minimum bid price requirement or prevent future non-compliance with the Nasdaq Marketplace Rules.

The Warrants offered by this prospectus may not have any value.

The Warrants offered by this prospectus will be exercisable for five years from the date of initial issuance at an initial exercise price equal to \$ (which shall not be less than 100% of the public offering price per Unit set forth on the cover page of this prospectus). There can be no assurance that the market price of our common stock will ever equal or exceed the exercise price of the Warrants. In the event that our common stock price does not exceed the exercise price of the Warrants during the period when the Warrants are exercisable, the Warrants may not have any value.

A Warrant does not entitle the holder to any rights as common stockholders until the holder exercises the Warrant for a share of our common stock.

Until you acquire shares of our common stock upon exercise of your Warrants, your Warrants will not provide you any rights as a common stockholder. Upon exercise of your Warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

If our shares become subject to the penny stock rules, it would become more difficult to trade our shares.

The SEC has adopted rules that regulate broker-dealer practices in connection with transactions in penny stocks. Penny stocks are generally equity securities with a price of less than \$5.00, other than securities registered on

certain national securities exchanges or authorized for quotation on certain automated quotation systems, provided that current price and volume information with respect to transactions in such securities is provided by the exchange or system. If we do not obtain or retain a listing on Nasdaq and if the price of our common stock is less than \$5.00, our common stock will be deemed a penny stock. The penny stock rules require a broker-dealer, before a transaction in a penny stock not otherwise exempt from those rules, to deliver a standardized risk disclosure document containing specified information. In addition, the penny stock rules require that before effecting any transaction in a penny stock not otherwise exempt from those rules, a broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive (i) the purchaser's written acknowledgment of the receipt of a risk disclosure statement; (ii) a written agreement to transactions involving penny stocks; and (iii) a signed and dated copy of a written suitability statement. These disclosure requirements may have the effect of reducing the trading activity in the secondary market for our common stock, and therefore stockholders may have difficulty selling their shares.

Future sales of shares by existing stockholders could cause our stock price to decline.

If our existing stockholders sell, or indicate an intent to sell, substantial amounts of our common stock in the public market, the trading price of our common stock could decline significantly and could decline below the initial public offering price. After giving effect to this offering and the conversion of our outstanding preferred stock and certain indebtedness to equity prior to the closing of this offering, we will have outstanding 10,953,168 shares of common stock based upon an assumed initial public offering price of \$4.75 per share, which is the midpoint of the price range for the Units set forth on the cover page of this prospectus and, assuming no exercise of outstanding options and warrants, including the Warrants. Of these shares, approximately 1,413,443 shares will be held by our non-affiliated stockholders and, together with 2,315,789 shares of common stock offered hereby, plus any shares sold pursuant to the underwriters' option to purchase additional shares, will be immediately freely tradable, without restriction, in the public market. If our non-affiliated stockholders sell substantial amounts of our common stock in the public market, or if the public perceives that such sales could occur, this could have an adverse impact on the market price of our common stock, even if there is no relationship between such sales and the performance of our business. We also intend to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates and the lock-up agreements described in the "Underwriting" section of this prospectus. Our non-affiliated stockholders are not subject to any lock-up agreements.

After the expiration of the lock-up agreements pertaining to this offering with our directors, executive officers and stockholders owning in excess of 5% of our outstanding shares of common stock, additional shares will be eligible for sale in the public market. In addition, upon issuance, the 818,915 shares subject to outstanding options under our 2014 Equity Incentive Plan ("2014 Plan") and the shares reserved for future issuance under our 2014 Plan will become eligible for sale in the public market in the future, subject to certain legal and contractual limitations. If our existing stockholders sell substantial amounts of our common stock in the public market, or if the public perceives that such sales could occur, this could have an adverse impact on the market price of our common stock, even if there is no relationship between such sales and the performance of our business.

If you purchase Units in this offering, you will suffer immediate dilution of your investment in the shares of common stock comprising such Units.

The public offering price of the shares of common stock comprising the Units offered hereby will be substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase Units in this offering, you will pay a price per share of the common stock comprising such Units that substantially exceeds our net tangible book value per share after this offering. Based on an assumed initial public offering price of \$4.75 per share, which is the midpoint of the price range for the Units set forth on the cover page of this prospectus, you will experience immediate dilution of \$4.07 per share, representing the difference between our pro forma net tangible book value per share, after giving effect to this offering, and the assumed initial public offering price. In addition, purchasers of common stock in this offering will have contributed approximately 59.1% of the aggregate price paid by all purchasers of our stock but will own only approximately 21.1% of our common stock outstanding after this offering.

We are an “emerging growth company” and the reduced disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the JOBS Act. We may remain an emerging growth company until as late as December 2026 (the fiscal year-end following the fifth anniversary of the completion of our initial public offering), though we may cease to be an emerging growth company earlier under certain circumstances, including (1) if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of any June 30, in which case we would cease to be an emerging growth company as of the following December 31, or (2) if our gross revenue exceeds \$1.07 billion in any fiscal year. Emerging growth companies may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. Investors could find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

In addition, Section 102 of the JOBS Act also provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended, or the Securities Act, for complying with new or revised accounting standards. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

We will incur significant costs as a result of operating as a public company and our management expects to devote substantial time to public company compliance programs.

As a public company, we will incur significant legal, accounting and other expenses due to our compliance with regulations and disclosure obligations applicable to us, including compliance with the Sarbanes-Oxley Act, as well as rules implemented by the SEC and Nasdaq. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact, in ways we cannot currently anticipate, the manner in which we operate our business. Our management and other personnel will devote a substantial amount of time to these compliance programs and monitoring of public company reporting obligations and as a result of the new corporate governance and executive compensation related rules, regulations and guidelines prompted by the Dodd-Frank Act and further regulations and disclosure obligations expected in the future, we will likely need to devote additional time and costs to comply with such compliance programs and rules. These rules and regulations will cause us to incur significant legal and financial compliance costs and will make some activities more time-consuming and costlier.

To comply with the requirements of being a public company, we may need to undertake various actions, including implementing new internal controls and procedures and hiring new accounting or internal audit staff. The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file with the SEC is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that information required to be disclosed in reports under the Securities Exchange Act of 1934, as amended, or the Exchange Act, is accumulated and communicated to our principal executive and financial officers. Our current controls and any new controls that we develop may become inadequate and weaknesses in our internal control over financial reporting may be discovered in the future. Any failure to develop or maintain effective controls when we become subject to this requirement could negatively impact the results of periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting that we may be required to include in our periodic reports we will file with the SEC under Section 404 of the Sarbanes-Oxley Act, harm our operating results, cause us to fail to meet our reporting obligations or result in a restatement of our prior period financial statements. In the event that we are not able to demonstrate compliance with the Sarbanes-Oxley Act, that our internal control over financial reporting is perceived

as inadequate or that we are unable to produce timely or accurate financial statements, investors may lose confidence in our operating results and the price of our common stock could decline. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on Nasdaq.

Our management team has limited experience managing a public company.

Most members of our management team have limited experience managing a publicly-traded company, interacting with public company investors and complying with the increasingly complex laws pertaining to public companies. Our management team may not successfully or efficiently manage our transition to being a public company subject to significant regulatory oversight and reporting obligations under the federal securities laws and the continuous scrutiny of securities analysts and investors. These new obligations and constituents will require significant attention from our senior management and could divert their attention away from the day-to-day management of our business, which could adversely affect our business, financial condition and operating results.

Because we have elected to use the extended transition period for complying with new or revised accounting standards for an emerging growth company our financial statements may not be comparable to companies that comply with public company effective dates.

We have elected to use the extended transition period for complying with new or revised accounting standards under Section 102(b)(1) of the JOBS Act. This election allows us to delay the adoption of new or revised accounting standards that have different effective dates for public and private companies until those standards apply to private companies. As a result of this election, our financial statements may not be comparable to companies that comply with public company effective dates, and thus investors may have difficulty evaluating or comparing our business, performance or prospects in comparison to other public companies, which may have a negative impact on the value and liquidity of our common stock and Warrants.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, our stock and warrant prices and trading volume could decline.

The trading market for our common stock and Warrants will depend, in part, on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts do not currently, and may never, publish research on us. If no securities or industry analysts commence coverage of us, the price for our common stock and Warrants could be negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who cover us downgrade our common stock or publish inaccurate or unfavorable research about our business, the prices of our common stock and Warrants could decline. In addition, if our operating results fail to meet the forecast of analysts, the prices of our common stock and Warrants could decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our common stock and Warrants could decrease, which might cause the prices of our common stock and Warrants and trading volume to decline.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management and limit the market price of our common stock and Warrants.

Provisions in our certificate of incorporation and bylaws, as amended and restated as of the closing of this offering, may have the effect of delaying or preventing a change of control or changes in our management. Our amended and restated certificate of incorporation and bylaws include provisions that:

- provide for a staggered board of directors;
- authorize our board of directors to issue, without further action by the stockholders, up to 20,000,000 shares of undesignated preferred stock and up to approximately 80,000,000 shares of authorized but unissued shares of common stock;
- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;

- specify that special meetings of our stockholders can be called only by our board of directors, the Chairman of the Board, the Chief Executive Officer or the President;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- provide that our directors may be removed only for cause; and
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us.

Our Amended and Restated Certificate of Incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for certain litigation that may be initiated by our stockholders.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory law or Delaware common law, subject to certain exceptions: (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders; (3) any action asserting a claim against us arising pursuant to provisions of the Delaware General Corporation Law or our amended and restated certificate of incorporation or amended and restated bylaws; or (4) any action asserting a claim governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and our directors, officers, employees and agents. Stockholders who do bring a claim in the Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near the State of Delaware. The Court of Chancery may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition. By agreeing to the exclusive forum provisions, investors will not be deemed to have waived our compliance obligations with any federal securities laws or the rules and regulations thereunder.

We do not anticipate paying any cash dividends on our common stock in the foreseeable future and, as such, capital appreciation, if any, of our common stock and Warrants will be your sole source of gain for the foreseeable future.

We have never declared or paid cash dividends on our common stock. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. In addition, and any future loan arrangements we enter into may contain, terms prohibiting or limiting the amount of dividends that may be declared or paid on our common stock. As a result, capital appreciation, if any, of our common stock and Warrants will be your sole source of gain for the foreseeable future.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. The forward-looking statements are contained principally in the sections titled “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” but are also contained elsewhere in this prospectus. In some cases, you can identify forward-looking statements by the words “may,” “might,” “will,” “could,” “would,” “should,” “expect,” “intend,” “plan,” “objective,” “anticipate,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue” and “ongoing,” or the negative of these terms, or other comparable terminology intended to identify statements about the future, although not all forward-looking statements contain these words. These statements relate to future events or our future financial performance or condition and involve known and unknown risks, uncertainties and other factors that could cause our actual results, levels of activity, performance or achievement to differ materially from those expressed or implied by these forward-looking statements. These forward-looking statements include, but are not limited to, statements about:

- the success, cost and timing of our product development activities, including statements regarding the timing of initiation and completion of our research and development programs;
- developments regarding next generation sequencing technologies;
- our expectations regarding the market size and growth potential for our business;
- the implementation of our strategic plans, including strategy for our business and related financing;
- our ability to maintain and establish future collaborations and strategic relationships;
- the rate and degree of market acceptance of our products;
- our ability to generate sustained revenue or achieve profitability;
- the potential for our identified research priorities to advance our technology;
- the pricing and expected gross margin for our products;
- our commercialization, marketing and manufacturing capability and strategy;
- our expectations related to the use of proceeds from this offering;
- our research and development plans including, among other things, statements relating to future uses, quality or performance of, or benefits of using, products or technologies;
- updates or improvements of our products;
- intentions regarding seeking regulatory approval for our products;
- our competitive position;
- our estimates of our expenses, ongoing losses, future revenue, capital requirements and our needs for, or ability to obtain, additional financing as necessary; and
- our ability to maintain our intellectual property position for our technology.

You should read this prospectus, including the section titled “Risk Factors,” and the documents that we reference elsewhere in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual results may differ materially from what we expect as expressed or implied by our forward-looking statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all.

These forward-looking statements represent our estimates and assumptions only as of the date of this prospectus regardless of the time of delivery of this prospectus or any sale of our common stock. Except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this prospectus. All subsequent forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to herein.

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately \$9.5 million from the sale of the 2,315,789 Units offered in this offering, or approximately \$11.0 million if the underwriters exercise their option to purchase additional shares and Warrants in full, based on an assumed initial public offering price of \$4.75 per Unit, the midpoint of the estimated price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$4.75 per Unit, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us from this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, by approximately \$2.1 million, assuming that the number of Units offered by us, as set forth on the cover page of this prospectus, remains the same. We may also increase or decrease the number of Units we are offering. An increase (decrease) of 100,000 in the number of Units we are offering would increase (decrease) the net proceeds to us from this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, by approximately \$437,000, assuming the initial public offering price stays the same.

We intend to use the net proceeds from the sale of the securities offered hereby for the following principal purposes:

Use of Net Proceeds	\$ (in millions)*	%
Expand our commercial operations to support life sciences research and applications development, including building additional sequencing instruments	\$ 4.0	42.1%
Improve and update our tSMS technology and instruments to develop additional applications	2.5	26.3
Assist existing and future partners in obtaining regulatory approvals or clearances to develop instruments and reagents in areas beyond life science research, including possibly LDTs	0.5	5.3
Support and expand our marketing and business development efforts	0.3	3.2
Payment of payables and accrued interest on indebtedness	0.5	5.3
Working capital and general corporate purposes	1.7	18.0
Total	\$ 9.5	100.0%

* Assuming the over-allotment option is not exercised.

We will allocate approximately 1.6% of the net proceeds of this offering to pay approximately \$150,000 of accrued interest on outstanding promissory notes that bear interest at the rate of 10% per annum. We have used the proceeds of such promissory notes for working capital purposes, including to pay certain expenses incurred in connection with this offering. We will also use \$26,000 of the net proceeds of this offering to pay in full certain non-interest-bearing demand notes we sold to Daniel Jones, our Chairman and Chief Executive Officer, the proceeds of which were used for working capital purposes.

[Table of Contents](#)

Although we currently anticipate that we will use the net proceeds from this offering as described above, there may be circumstances where a reallocation of funds is necessary. Due to the uncertainties inherent in the technology development process, it is difficult to estimate with certainty the exact amounts of the net proceeds from this offering that may be used for the above purposes. The amounts and timing of our actual expenditures will depend upon numerous factors, including our sales and marketing and commercialization efforts, demand for our technology, our operating costs and the other factors described under “Risk factors” in this prospectus. Accordingly, our management will have flexibility in applying the net proceeds from this offering. An investor will not have the opportunity to evaluate the economic, financial or other information on which we base our decisions on how to use the proceeds.

Until we use the net proceeds of this offering in our business, such funds will be managed through a treasury management program under the supervision of our Chief Financial Officer and invested in short-term, interest-bearing investments, which may include interest-bearing bank accounts, money market funds, certificates of deposit and U.S. government securities.

DIVIDEND POLICY

We do not anticipate paying cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects, the requirements of current or then-existing debt instruments and other factors our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of March 31, 2021:

- on an actual basis;
- on a pro forma basis to reflect (1) the conversion of all outstanding shares of our preferred stock into 3,130,622 shares of our common stock and the conversion of outstanding indebtedness in the principal amount of \$2,141,730 into an aggregate of 641,895 shares of our common stock immediately prior to the closing of this offering, (2) the filing and effectiveness of our amended and restated certificate of incorporation, which will occur immediately prior to the closing of this offering, as if such conversions and filing had occurred on March 31, 2021; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of 2,315,789 Units in this offering at an assumed initial public offering price of \$4.75 per Unit, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma and pro forma as adjusted information below is illustrative only and our capitalization following the completion of this offering is subject to adjustment based on the initial public offering price of our Units and other terms of this offering determined at pricing. You should read the following table in conjunction with “Use of Proceeds,” “Selected Financial Data,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Description of Capital Stock” and other financial information contained in this prospectus, including the financial statements and related notes appearing elsewhere in this prospectus.

	As of March 31, 2021		
	Actual	Pro Forma	Pro Forma As Adjusted
Cash and cash equivalents	\$ 9,099	\$ 9,099	\$ 9,519,097
Debt:			
Loan payable – related party	\$ 26,000	\$ 26,000	\$ 26,000
Notes payable – related party	1,645,000	1,645,000	1,645,000
Convertible promissory notes	2,141,730	—	—
Total debt	\$ 3,812,730	1,671,000	\$ 1,671,000
Stockholders’ Equity (Deficit):			
Preferred stock, \$0.00001 par value; 20,000,000 shares authorized at March 31, 2021; 5,791,665 shares issued and outstanding at March 31, 2021 and no shares issued and outstanding pro forma and pro forma as adjusted	\$ 58	\$ —	\$ —
Common stock, \$0.00001 par value; 80,000,000 shares authorized at March 31, 2021; 4,864,862 shares issued and outstanding at March 31, 2021, 8,637,379 shares issued and outstanding pro forma and 10,953,168 shares issued and outstanding pro forma as adjusted	49	86	109
Additional paid-in capital	6,857,027	8,998,778	18,508,753
Accumulated deficit	(12,124,911)	(11,190,654)	(11,190,654)
Total stockholders’ equity (deficit)	\$ (5,267,777)	\$ (2,191,790)	\$ 7,318,208
Total capitalization	\$ (1,455,047)	\$ (520,790)	\$ 8,989,208

A \$1.00 increase or decrease in the assumed initial public offering price of \$4.75 per Unit, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, each of cash, additional paid-in capital, total stockholders’ (deficit) equity and total capitalization by approximately \$2.1 million, assuming the number of Units offered by us, as stated on the cover page of this prospectus, remains unchanged and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 100,000 in the number of Units we are offering would increase or decrease, as applicable, each of cash, additional paid-in capital, total stockholders’ (deficit) equity and total

[Table of Contents](#)

capitalization by approximately \$437,000, assuming the assumed initial public offering price of \$4.75 per Unit, which is the midpoint of the price range set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The preceding table does not include:

- 711,946 shares of our common stock issuable upon the exercise of warrants, at a weighted average exercise price of \$2.65 per share;
- 115,789 shares of our common stock that may be issued upon exercise of the Underwriters' Warrants at an exercise price of \$5.22, which represents 5% of the shares of common stock being offered hereby and 110% of an assumed public offering price of \$4.75, which is the midpoint of the initial public offering price range reflected on the cover of this prospectus;
- 818,915 shares of our common stock issuable upon the exercise of outstanding stock options under our 2014 Equity Incentive Plan with a weighted average exercise price of \$1.77 per share; and
- 262,166 shares of our common stock reserved for future issuance under our 2014 Equity Incentive Plan.

DILUTION

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

Our historical net tangible book value (deficit) is the amount of our total assets less our liabilities. Our historical net tangible book value (deficit) per share is our historical net tangible book value (deficit) divided by the number of shares of common stock outstanding as of March 31, 2021. Our historical net tangible book value (deficit) as of March 31, 2021, was (\$5,267,777), or (\$1.08) per share of common stock.

Our pro forma net tangible book value (deficit) is our historical net tangible book value (deficit) after giving effect to the conversion of all of our outstanding shares of our preferred stock into an aggregate of 3,130,622 shares of our common stock and the conversion of certain outstanding indebtedness into an aggregate of 641,895 shares of our common stock immediately prior to the closing of this offering. Our pro forma net tangible book value (deficit) as of March 31, 2021, was (\$2,191,790) or (\$0.25) per share of common stock.

Pro forma as adjusted net tangible book value is our pro forma net tangible book value (deficit), after giving further effect to the sale of 2,315,789 Units in this offering at an assumed initial public offering price of \$4.75 per share of common stock included in each Unit, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, but assuming no exercise of the Warrants included in the Units offered hereby or the warrants granted to the Representative of the underwriters.

The following table illustrates this dilution on a per share basis to new investors:

Assumed initial public offering price per Unit		\$ 4.75
Historical net tangible book value (deficit) per share as of March 31, 2021	\$ (1.08)	
Increase in pro forma net tangible book value attributable to conversion of our preferred stock and notes	<u>\$ 0.83</u>	
Pro forma net tangible book value (deficit) per share as of March 31, 2021, before giving effect to this offering	(0.25)	
Increase in pro forma net tangible book value per share attributable to new investors participating in this offering	<u>\$ 0.92</u>	
Pro forma as adjusted net tangible book value per share after this offering		\$ 0.67
Dilution in pro forma net tangible book value per share to new investors participating in this offering		<u>\$ 4.08</u>

A \$1.00 increase or decrease in the assumed initial public offering price of \$4.75 per Unit, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the pro forma as adjusted net tangible book value (deficit) per share after this offering by approximately \$0.19 per share and increase or decrease, as appropriate, the dilution in pro forma net tangible book value (deficit) per share to investors participating in this offering by approximately \$0.81 per share, assuming that the number of Units offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

Similarly, a 100,000 share increase or decrease in the number of Units offered by us, as set forth on the cover page of this prospectus, would increase or decrease, as appropriate, the pro forma as adjusted net tangible book value (deficit) after this offering by approximately \$0.03 and increase or decrease, as appropriate, the dilution in pro forma net tangible book value (deficit) per share to investors participating in this offering by approximately \$0.03, assuming the assumed initial public offering price of \$4.75 per Unit, which is the midpoint of the price range set forth on the cover page of this prospectus, remains the same, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma information discussed above is illustrative only and will change based on the actual initial public offering price, number of shares and other terms of this offering determined at pricing.

[Table of Contents](#)

If the underwriters exercise in full their option to purchase additional shares of our common stock and Warrants in this offering, the pro forma as adjusted net tangible book value will increase to \$0.78 per share, representing an increase in pro forma net tangible book value to existing stockholders of \$1.04 per share and a dilution of \$3.97 per share to new investors participating in this offering.

The following table sets forth, on the pro forma as adjusted basis described above as of March 31, 2021, the differences between our existing stockholders and the purchasers of shares of common stock in this offering with respect to the number of shares of common stock purchased from us, the total consideration paid to us and the weighted average price paid per share paid to us, based on an assumed initial public offering price of \$4.75 per Unit, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting underwriting discounts and commissions and estimated offering expenses payable by us, but assuming no exercise of the Warrants included in the Units offered hereby.

	Shares Purchased		Total Consideration		Weighted Average Price per Share
	Number	Percent	Amount	Percent	
Existing stockholders	8,637,379	78.9%	\$ 7,621,719	40.9	\$ 0.88
New investors	2,315,789	21.1	\$ 11,000,000	59.1	\$ 4.75
Total	10,953,169	100.0%	\$ 18,621,719	100.0%	\$ 1.70

If the underwriters exercise in full their option to purchase additional shares of our common stock in this offering, the number of shares held by existing stockholders will be reduced to 76.4% of the total number of shares of common stock that will be outstanding upon completion of this offering, and the number of shares of common stock held by new investors participating in this offering will be further increased to 23.6% of the total number of shares of common stock that will be outstanding upon completion of the offering, before any sales by any Selling Stockholders of any of the shares of common stock registered concurrently with this offering.

To the extent that any outstanding options or warrants, including the Warrants, are exercised, new options are issued under our 2014 Plan or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. If all outstanding options and warrants as of March 31, 2021, other than the option held by the underwriters, and the Warrants included in the Units offered hereby, were exercised, then our existing stockholders, including holders of such options and warrants, would own 68.7% and our new investors would own 31.3% of the total number of shares of our common stock outstanding upon the completion of this offering. In such event, the total consideration paid by our existing stockholders, including the holders of such options and warrants, would be approximately \$11.0 million, or 33.0%, the total consideration paid by our new investors would be \$22.0 million, or 67.0% of the total consideration for our common stock outstanding upon the completion of this offering, and the weighted average price per share paid by our existing stockholders would be \$2.68 and the average price per share paid by our new investors would be \$4.75.

A \$1.00 increase or decrease in the assumed initial public offering price of \$4.75 per Unit, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as appropriate, the total consideration paid by new investors by \$2.1 million, assuming the number of Units we are offering, as set forth on the cover page of this prospectus, remains the same, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Similarly, each increase or decrease of 100,000 Units in the number of Units offered by us would increase or decrease, as appropriate, the total consideration paid by new investors by \$437,000, assuming that the assumed initial price to the public remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We may choose to raise additional capital through the sale of equity or equity-linked securities due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that any options are issued under our equity incentive plan or we issue additional shares of common stock or equity-linked securities in the future, there will be further dilution to investors purchasing in this offering.

[Table of Contents](#)

The number of shares of our common stock to be outstanding after this offering is based on 4,864,862 shares of common stock outstanding as of March 31, 2021, the conversion of our preferred stock into an aggregate of 3,130,622 shares of our common stock and the conversion of outstanding indebtedness in the aggregate principal amount of \$2,141,730 into an aggregate of 641,895 shares of our common stock, which conversions will occur prior to the closing of this offering, and excludes as of such date:

- 711,946 shares of our common stock issuable upon the exercise of warrants, at a weighted average exercise price of \$2.65 per share;
- 115,789 shares of our common stock that may be issued upon exercise of the Underwriters' Warrants at an exercise price of \$5.22, which represents 5% of the shares of common stock being offered hereby and 110% of an assumed public offering price of \$4.75, which is the midpoint of the initial public offering price range reflected on the cover of this prospectus;
- 818,915 shares of our common stock issuable upon the exercise of outstanding stock options under our 2014 Equity Incentive Plan with a weighted average exercise price of \$1.77 per share; and
- 262,166 shares of our common stock reserved for future issuance under the 2014 Equity Incentive Plan.

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

You should read the following discussion of our financial condition and results of operations in conjunction with "Selected Financial Data" and our financial statements and related notes included elsewhere in this prospectus. This discussion and analysis and other parts of this prospectus contain forward-looking statements based upon current beliefs, plans and expectations that involve risks, uncertainties and assumptions. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of several factors, including those set forth under "Risk Factors" and elsewhere in this prospectus. You should carefully read the "Risk Factors" section of this prospectus to gain an understanding of the important factors that could cause actual results to differ materially from our forward-looking statements. Please also see the section entitled "Cautionary Note Regarding Forward-Looking Statements and Industry and Market Data" in this prospectus.

Overview

Since our incorporation in 2014, we have devoted the majority of our efforts to technology development, business planning, and advancing research collaborations. We incurred net losses of \$1,414,618, \$546,871, \$1,045,353 and \$2,473,549 and had negative cash flow from operating activities of \$235,651, \$310,863, \$757,911 and \$1,585,331 for the three-month periods ended March 31, 2021 and 2020 and the years ended December 31, 2020 and 2019, respectively, and had an accumulated deficit of \$12,124,911 as of March 31, 2021. These conditions among others raise substantial doubts about our ability to continue as a going concern. Our ability to continue to operate is dependent upon the success of this offering.

Going Concern and Management's Plan

Our consolidated financial statements are prepared based on the assumption that we will continue as a going concern, which contemplates the realization of assets and liquidation of liabilities in the normal course of business. We face certain risks and uncertainties that are present in many emerging growth companies regarding product development and commercialization, limited working capital, recurring losses and negative cash flow from operations, future profitability, our ability to obtain future capital, our protection of patents, technologies and property rights, competition, rapid technological change, navigating the domestic and major foreign markets' regulatory environment, recruiting and retaining key personnel, our dependence on licensing agreements and our lack of sales and marketing activities. These risks and other factors raise substantial doubt about our ability to continue as a going concern.

We have relied exclusively on private placements with a small group of accredited investors to finance our business and operations. We do not have any credit facilities as a source of future funds. If we are not successful in securing additional outside financing, there are no assurances that the existing investors will continue to fund us to an adequate level of financing needed for the long-term development and commercialization of our products.

We are looking at ways to add an additional revenue stream to offset some of our expenses. We are planning to raise additional funds following the completion of this offering. In addition, we are seeking alternative options to fund our operations, including public or private grants, third-party collaborations and joint ventures. However, no assurance can be given that we will be successful in securing adequate funds that may be required. If we are unable to raise additional capital when required or on acceptable terms, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our products, restrict our operations or obtain funds by entering into agreements on unattractive terms, which would likely have a material adverse effect on our business, our stock price and our relationships with third parties with whom we have business relationships, at least until additional funding is obtained.

Doubts exist about our ability to continue as a going concern. The accompanying consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of recorded assets, or the amounts and classification of liabilities that might be different should we be unable to continue as a going concern based on the outcome of these uncertainties described above. Our management and board of directors believe that the net proceeds from this offering, together with our cash generated from commercial sales and research activity, will enable us to fund our operations for several years.

Results of Operations**Comparison of the Three-Month Periods Ended March 31, 2021 and 2020**

	Three months ended March 31,		%
	2021	2020	
Revenue			
Sales	\$ 26,100	\$ 41,838	(38)%
Grant revenue	34,633	36,975	(6)%
Total revenue	60,733	78,813	(23)%
Cost of sales	27,951	83,820	(67)%
Gross profit (loss)	32,782	(5,007)	(755)%
Operating expenses			
Research and development	17,955	240,057	(93)%
General and administrative	387,387	236,026	64%
Total operating expenses	405,342	476,083	(15)%
Operating loss	(372,560)	(481,090)	(23)%
Other (income) and expenses			
Other income	—	(1,016)	(100)%
Loss on extinguishment of notes	934,257	—	n.a.
Interest expense	107,801	66,797	61%
Net loss	\$ (1,414,618)	\$ (546,871)	159%
Net loss per share – basic and diluted	\$ (0.29)	\$ (0.11)	159%
Weighted average common shares – basic and diluted	4,864,862	4,864,862	

Revenues

Our revenues during the three months March 31, 2021 were \$60,733 as compared to revenues of \$78,813 during the three months ended March 31, 2020. During 2021, revenue included product sales of \$15,600, grants of \$34,633 and \$10,500 from research services as compared to revenue in the same period of 2020 from product sales of \$0, grants of \$36,975 and \$41,838 in research services. The decrease in revenue was primarily a result of the reduction in research services and business activities due to the COVID-19 pandemic.

Gross Profit (Loss)

Gross profit for the three months ended March 31, 2021 was \$32,782, as compared to gross loss of \$(5,007) for the three months ended March 31, 2020, which represented a 755% increase primarily due to a reduction in cost of sales attributed to the operational slowdown due Covid-19 pandemic.

Research and Development Expenses

Research and development expenses decreased by \$222,102, or 93%, from \$240,057 for the three months ended March 31, 2020 compared to \$17,955 for the three months ended March 31, 2021. The decrease in expenses was a result of the expiration of our NIH grant with Massachusetts General Hospital, which expired in July 2020, and reduction in our investments committed to research and development in 2020 compared to the previous year due to the COVID-19 pandemic. We expect these expenditures to increase over the second half of 2021 and beyond as we increase our research and development efforts to pre-pandemic levels with a portion of the net proceeds of this offering and expand our partnership and collaborative relationships over time.

General and Administrative Expenses

General and administrative expenses increased by \$151,361, or 64%, from \$236,026 for the three months ended March 31, 2020 compared to \$387,387 for the three months ended March 31, 2021. The increase was primarily

[Table of Contents](#)

attributable to increased operating expenses related to our financing efforts, including the addition of accounting staff, consultants, attorneys and auditors. General and administrative expenditures will continue to increase during 2021 as a result of our financing efforts and to support ongoing financial reporting and compliance activities.

Interest and Other Income/Loss

We recognized interest expense of \$107,801 and \$66,797 in the three-month periods ended March 31, 2021 and 2020, respectively, representing an increase of \$41,004, or 61%, in the current quarter over the comparable quarter of 2020. The increase in interest expense was due to an increase in our outstanding indebtedness in 2020 to 2021, which increased in the aggregate by approximately \$1.0 million during the period from April 1, 2020 and March 31, 2021, representing a total of approximately \$3.8 million at March 31 2021.

Between March 15, 2021 and March 26, 2021, we entered into the agreements with certain noteholders to convert \$786,730 aggregate principal amount of outstanding non-convertible promissory notes and \$1,355,000 aggregate principal amount of outstanding convertible notes to common stock upon the closing of this offering, of which \$1,791,730 aggregate principal amount of notes is held by St. Laurent Investments, LLC and its affiliates. Under the terms of such agreements, \$876,020 and \$1,265,710 principal amount of notes are to be converted at conversion prices of \$3.75 and \$3.10, respectively. As the conversion may result in a material benefit to the noteholders, the conversion agreements were deemed substantive and were accounted for as an extinguishment of debt. Accordingly, we recognized a loss on extinguishment of debt totaling \$934,257 in our statement of operations for the three-month period ended March 31, 2021, which represented the excess of the fair value of the notes to be converted totaling \$3,075,987 over their carrying value of \$2,141,730.

Net Loss

Our net loss for the three months ended March 31, 2021 increased by \$867,747, or 159%, to \$1,414,618 as compared to \$546,871 for the three months ended March 31, 2020 due primarily to the extinguishment loss of \$934,257 for the conversion features added to \$2.1 million aggregate principal amount of promissory notes.

Comparison of the Years Ended December 31, 2020 and 2019

The following table represents selected items in our consolidated statements of operations for the years ended December 31, 2020 and 2019:

	Years Ended December 31,		Change
	2020	2019	
Revenue			
Sales	\$ 50,588	\$ 160,480	(68)%
Grant revenue	278,907	372,649	(25)%
Total revenue	329,495	533,129	(38)%
Cost of sales	170,803	219,763	(22)%
Gross profit	158,692	313,366	(49)%
Operating expenses			
Research and development	330,979	1,245,168	(73)%
General and administrative	777,435	1,359,497	(43)%
Total operating expenses	1,108,414	2,604,665	(57)%
Operating loss	(949,722)	(2,291,299)	59%
Other income (expenses)			
Other income	191,566	—	n.m.
Interest expense	(287,197)	(182,250)	58%
Net loss	\$ (1,045,353)	\$ (2,473,549)	58%

Revenues

Our revenues during the year ended December 31, 2020 were \$329,495 as compared to revenues of \$533,129 during the year ended December 31, 2019. During 2020, revenue included grants of \$278,907 and 50,588 from research services as compared to revenue in 2019 from product sales of \$2,000, grants of \$372,649 and \$158,048 in research services. The decrease in revenue was primarily a result of the expiration of our NIH grant with Massachusetts General Hospital, which expired in July 2020, and the slowdown in business activities due to the COVID-19 pandemic.

Gross Profit

Gross profit for the year ended December 31, 2020 was \$158,692 as compared to gross profit of \$313,366 for the year ended December 31, 2019, which represent a 49% decrease due to the expiration of one NIH grant in July 2020 and the operational slowdown due Covid-19 pandemic.

Research and Development Expenses

Research and development expenses decreased by \$914,189, or 73%, from \$1,245,168 in 2019 to \$330,979 in 2020. Due to the COVID-19 pandemic, we reduced our investments committed to research and development in 2020 compared to the previous year.

General and Administrative Expenses

General and administrative expenses decreased by \$582,062, or 43%, from \$1,359,497 for the year ended December 31, 2019 to \$777,435 for the year ended December 31, 2020. The decrease was primarily attributable to reduced operating expenses related to the COVID-19 pandemic-related slowdown, including salary reductions, furloughs and reduced spending.

Interest and Other Income

We recognized interest expense of \$287,197 in 2020 and \$182,250 in 2019, representing an increase of \$104,947, or 58%, in interest expense for 2020. The increase in interest expense was due to an increase in our outstanding indebtedness in 2020, which increased in the aggregate by \$1.0 million during the year to a total of \$3.5 million at December 31 2020. We recorded other income of \$191,566 and \$0 in the years ended December 31, 2020 and 2019, respectively. The increase in other income in 2020 was due to receipt of funds in connection with the Paycheck Protection Program (“PPP”) pursuant to the CARES Act that was signed into law on March 27, 2020.

Net Loss

Our net loss for the year ended December 31, 2020 decreased by \$1,428,196, or 58%, to \$1,045,353 as compared to \$2,473,549 for the year ended December 31, 2019. The decrease was primarily attributable to reduction in research and development expenses by \$914,189 and a reduction in general and administrative expenses by \$582,062 in 2020 as compared to 2019 due to the COVID-19 pandemic-related slowdown, including salary reductions, furloughs and reduced spending.

Liquidity and Capital Resources

We have incurred losses since our incorporation in 2014 and negative cash flows from operating activities for the three-month period ended March 31, 2021 and the years ended December 31, 2020 and 2019. As of March 31, 2021, we had an accumulated deficit of \$12,124,911. Since inception, we have funded our operations primarily through equity and debt financings, as well as from modest sales.

Through March 31, 2021, we issued 5,791,665 shares of Series A preferred stock to certain accredited investors, of which 2,666,665 were Series A-2 shares at a purchase price of \$3.10 per share during the period 2016 to 2018, and 3,125,000 were Series A-1 shares at a purchase price of \$0.32 per share in 2014. The gross proceeds from the Series A-1 preferred stock was \$1.0 million and the Series A-2 preferred stock was \$4.5 million. We incurred offering expenses of \$18,674 on the Series A-2 rounds. All of our outstanding shares of preferred stock will be converted into an aggregate of 3,130,622 shares of our common stock in connection with the closing of this offering.

[Table of Contents](#)

From September 30, 2018 to April 8, 2019, we sold to St. Laurent Investments LLC, a private investment fund of the St. Laurent family of which Mr. William C. St. Laurent, our former Chairman of the Board, is the managing partner, a series of convertible promissory notes in the aggregate principal amount of \$0.9 million and five-year warrants to purchase an aggregate of 17,459 shares of our common stock. In 2018, we converted the accrued interest on these convertible promissory notes through September 30, 2018 in the amount of \$0.4 million, into a one year non-convertible promissory note that bears interest at the rate of 10% per annum.

From April 29, 2019 to April 29, 2020, we sold to St. Laurent Investments LLC a series of non-convertible promissory notes in the aggregate principal amount of \$1.4 million. Each promissory note originally had a one-year term, which have been extended to July 31, 2022, and bear interest at the rate of 10% per annum. At March 31, 2021, the principal amount of these non-convertible promissory notes and accrued interest thereon amounted to \$1.5 million.

In December 2020, we issued another non-convertible promissory note for the conversion of accrued interest for the period October 1, 2018 to December 31, 2020 on all notes issued to St. Laurent Investments LLC totaling \$0.4 million. The principal amount of these convertible and non-convertible promissory notes, totaling \$1.7 million as of March 31, 2021, will be converted in full into an aggregate of 521,896 shares of common stock in connection with the closing of this offering.

During the three months ended March 31, 2021, we sold \$250,000 aggregate principal amount of senior secured convertible promissory notes to investors for the total proceeds of \$250,000. The senior secured convertible promissory notes accrue interest at 10% per annum and will be converted to common stock at a conversion price of \$3.75 per share in connection with the consummation of this offering. In connection with the sale of these convertible promissory notes, we issued warrants to purchase an aggregate of 66,665 shares of common stock at an exercise price of \$4.10 per share, and additional common stock purchase warrants as related agency fees to purchase an aggregate of 10,665 shares of common stock at an exercise price of \$4.10 per share.

We do not have any credit facilities as a source of future funds, and there can be no assurance that we will be able to raise sufficient additional capital on acceptable terms, or at all. As a result, substantial doubt exists about our ability to continue as a going concern. The accompanying consolidated financial statements do not include any adjustment to reflect the possible future effects on the recoverability and classification of recorded assets, or the amounts and classification of liabilities that might be different should we be unable to continue as a going concern.

We believe the net proceeds from this offering, together with our cash generated from commercial sales and research activity, will enable us to fund our operations through at least December 2022. After this offering, however, we will continue seeking additional financing sources from time to time to meet our working capital requirements, make continued investment in research and development and make capital expenditures needed for us to maintain and expand our business. We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, or if we expend capital on projects that are not successful, our ability to continue to support our business growth and to respond to business challenges could be significantly limited, or we may have to cease our operations. These factors, among others, raise substantial doubt about our ability to continue as a going concern. If we raise additional funds through further issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock, including shares of common stock sold in this offering.

Cash Flows

The following table sets forth the primary sources and uses of cash and cash equivalents for each of the periods presented.

	Three Months Ended March 31,		For the Years Ended December 31,	
	2021	2020	2020	2019
Cash proceeds provided by (used in):				
Operating activities	\$ (235,651)	\$ (310,863)	\$ (757,911)	\$ (1,585,331)
Investing activities	(5,250)	—	—	—
Financing activities	250,000	305,000	752,048	1,526,500
Net increase (decrease) in cash and cash equivalents	<u>\$ 9,099</u>	<u>\$ (5,863)</u>	<u>\$ (5,863)</u>	<u>\$ (58,831)</u>

Net cash used in operating activities

Net cash used in operating activities was approximately \$0.24 million, \$0.31 million, \$0.76 million and \$1.59 million for the three-month periods ended March 31, 2021 and 2020 and the years ended December 31, 2020 and 2019, respectively. The decreases were primarily attributable to reduced research and development and operating expenses as a result of the COVID-19 pandemic-related slowdown, including salary reductions, furloughs and reduced spending.

We anticipate our research and development efforts and on-going general and administrative costs will generate negative cash flows from operating activities for the foreseeable future.

Net cash used in investing activities

Net cash used in investing activities was \$5,250 and \$0 for the three-month period ended March 31, 2021 and 2020, respectively, and none in the years ended December 31, 2020 and 2019.

Net cash provided by financing activities

Net cash provided by financing activities was approximately \$0.25 million, \$0.31 million, \$0.75 million and \$1.53 for the three-month periods ended March 31, 2021 and 2020 and the years ended December 31, 2020 and 2019, respectively. The decreases were primarily attributable to reduced debt financing as a result of the reduction in our research and development and operating expenses due to the COVID-19 pandemic-related slowdown, including salary reductions, furloughs and reduced spending.

Recent Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2016-02, Leases (“ASU 2016-02”) which establishes new accounting and disclosure requirements for leases. ASU No. 2016-02 requires recognition in the statement of operations of a single lease cost, calculated so that the cost of the lease is allocated over the lease term, generally on a straight-line basis. ASU 2016-02 requires classification of all cash payments within operating activities in the statement of cash flows. Disclosures are required to provide the amount, timing and uncertainty of cash flows arising from leases. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. The Company will adopt the provisions of ASU 2016-02 in the quarter beginning January 1, 2022.

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. This standard simplifies the accounting for income taxes by eliminating certain exceptions to the guidance in Topic 740 related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill and allocating consolidated income taxes to separate financial statements of entities not subject to income tax. ASU 2019-12 is effective for fiscal years beginning after December 15, 2020, with early adoption permitted. Upon adoption, we must apply certain aspects of this standard retrospectively for all periods presented while other aspects are applied on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year of adoption. We are currently evaluating the impact of this new standard on our consolidated financial statements.

In August 2020, FASB issued ASU 2020-06, Debt — Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging — Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity, which, among other things, provides guidance on how to account for contracts on an entity’s own equity. This ASU eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. It also amends the accounting for certain contracts in an entity’s own equity that are currently accounted for as derivatives because of specific settlement provisions. In addition, this ASU modifies how particular convertible instruments and certain contracts that may be settled in cash or shares impact the diluted EPS computation. The amendments in this ASU are effective for the public companies for fiscal years beginning or after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020. We are currently evaluating the impact of ASU 2020-06 on our consolidated financial statements.

Critical Accounting Policies and Estimates

Long-Lived Assets

We assess, on an annual basis, the recoverability of the carrying amount of long-lived assets used in continuing operations. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the future net cash flow expected to be generated by the asset. A loss is recognized when expected future cash flow (undiscounted and without interest) are less than the carrying amount of the asset. The impairment loss is determined as the difference by which the carrying amount of the asset exceeds its fair value. No impairments were recognized during the three-month periods ended March 31, 2021 and 2020 or the years ended December 31, 2020 and 2019.

Stock-based Compensation

Our share-based compensation program grant awards include stock options and restricted stock awards. The fair value of stock option grants is estimated as of the date of the grant using the Black-Scholes option pricing model. The fair value of restricted stock awards is based on the fair value of our common stock on the date of the grant. The fair value of the stock-based awards are then expensed over the requisite service period, generally the vesting period, for each award.

Our expected stock price volatility assumption is based on the volatility of comparable public companies. The expected term of a stock option granted to employees and directors (including non-employee directors) is based on the average of the contractual term (generally 10 years) and the vesting period. For other non-employee options, the expected term is the contractual term. The risk-free interest rate is based on the yield of U.S. Treasury securities consistent with the life of the option. No dividend yield was assumed as we do not pay dividends on our common stock. We recognize forfeitures related to stock-based awards as they occur.

We have periodically granted stock options and restricted stock awards to consultants for services, pursuant to our stock plans at the fair market value on the respective dates of grant. Should we terminate any of our consulting agreements, the unvested options underlying the agreements would be cancelled. For awards granted to consultants and non-employees, compensation expense is recognized over the vesting period of the awards, which is generally the period services are rendered by such consultants and non-employees.

We did not grant any stock options during the three-month period ended March 31, 2021 or the year ended December 31, 2020, and granted stock options to purchase an aggregate of 32,431 shares of common stock in the year ended December 31, 2019.

Revenue Recognition

Our revenue is generated primarily from the sale of products and research services. Product revenue primarily consists of sales of genetic sequencing equipment and sequencing kits. Research service revenue primarily consists of revenue generated from genetic sequencing services and grants.

We recognize revenue in accordance with Accounting Standards Codification (“ASC”) Topic 606, Revenue from Contracts with Customers (“ASC 606”). Under ASC 606, we recognize revenue when control of our products and services is transferred to our customers in an amount that reflects the consideration we expect to receive from our customers in exchange for those products and services. To determine the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of ASC 606, we perform a five-step process. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when (or as) the performance obligations have been satisfied. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. We only apply the five-step process to contracts when it is probable that the entity will collect consideration it expects to be entitled to in exchange for the goods or services it transfers to the customer.

We evaluate contingent payments to estimate the amount which is not probable of a material reversal to include in the transaction price using the most likely amount method. Future payments that are not within our control and are not considered probable of being achieved until the contingencies are resolved.

Revenue from product sales, including customized sequencing instruments and sequencing reagent kits and off-the-shelf consumables, is recognized generally upon delivery, which is when control of the product is deemed to be transferred.

Revenue from gene sequencing services, using the tSMS platform, is recognized generally as the services are provided to the customer. The components of the sequencing process, including reagent kits and off-the-shelf consumables, sample loader and sequencer, are not distinct within the context of the genetic sequencing service contract. This is because in a gene sequencing service contract the reagent kits and other components, such as off-the-shelf consumables, used in the sequencing process become required inputs to achieve the specified gene sequencing analysis, and the components in the sequencing process are sequential in nature and highly-interrelated as they work together to generate sample-specific data.

We have elected to exclude sales tax from revenue. We generally have no obligations for returns, refunds and other similar obligations and do not provide separate equipment warranties. We recognized \$10,500, \$50,588 and \$158,480 in revenue from sequencing services for the three-month period ended March 31, 2021 and the years ended December 31, 2020 and 2019, respectively. We recognized \$15,600, \$0 and \$2,000 in revenue from product sales for the three-month period ended March 31, 2021 and the years ended December 31, 2020 and 2019, respectively.

Grant Revenue

Our grant revenues are derived from research programs by various departments of the National Institute of Health (“NIH”).

Grants awarded to us for research and development by government entities are outside the scope of the contracts with customers and contributions guidance. This is because these granting entities are not considered to be customers and are not receiving reciprocal value for their grant support provided to us. These grants provide us with payments for certain types of expenditures in return for research and development activities over a contractually defined period.

We recognize NIH grant revenue as reimbursable grant costs that are incurred up to pre-approved award limits within the budget period. The costs associated with these reimbursements are reflected as a component of research and development expense in the accompanying consolidated statements of operations. In the three-month periods ended March 31, 2021 and 2020 and the years ended December 31, 2020 and 2019, we recognized grant revenue of \$36,975, \$34,633, \$278,907 and \$372,649, respectively.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements as defined in the rules and regulations of the SEC. We do not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or for any other contractually narrow or limited purpose.

JOBS Act

Section 107 of the JOBS Act provides that an “emerging growth company” can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of new or revised accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

For as long as we remain an emerging growth company under the recently-enacted JOBS Act, we will, among other things:

- be permitted to have only two years of audited financial statements and only two years of related selected financial data and management’s discussion and analysis of financial condition and results of operations disclosure;
- be entitled to rely on an exemption from compliance with the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act;
- be entitled to reduced disclosure obligations about executive compensation arrangements in our periodic reports, registration statements and proxy statements; and
- be exempt from the requirements to seek non-binding advisory votes on executive compensation or golden parachute arrangements.

Although we are still evaluating the JOBS Act, we currently intend to take advantage of some or all of the reduced regulatory and reporting requirements that will be available to us so long as we qualify as an “emerging growth company.” Among other things, this means that our independent registered public accounting firm will not be required to provide an attestation report on the effectiveness of our internal control over financial reporting so long as we qualify as an emerging growth company, which may increase the risk that weaknesses or deficiencies in our internal control over financial reporting go undetected.

Likewise, so long as we qualify as an emerging growth company, we may elect not to provide certain information, including certain financial information and certain information regarding compensation of our executive officers, that we would otherwise have been required to provide in filings we make with the SEC, which may make it more difficult for investors and securities analysts to evaluate our company. As a result, investor confidence in our company and the market price of our common stock may be materially and adversely affected.

BUSINESS

Overview

We are a development-stage life sciences instrumentation and research services company engaged in the development of scientific assets and novel intellectual property across multiple “omics” fields. We leverage our expertise with True Single Molecule Sequencing (tSMS) technology enabling researchers and clinicians to contribute major advancements to scientific research and development by accelerating one’s understanding of the molecular mechanisms of disease and fundamental biological processes. We believe our proprietary sequencing technology platform has critical advantages over existing NGS (Next Generation Sequencing) technologies, particularly for emerging applications in the research and development of biomarker discovery, epigenetics, nucleotide chemistry, forensics, and cell-free nucleic acid analysis. Our mission is to empower researchers with improved genetic tools that enable scientists and physicians to better understand the molecular mechanisms of disease and the underlying biological systems. This knowledge is essential to the continued development of new breakthroughs in genomic medicine that address the critical concerns involved with today’s precision medicine.

Our single molecule technology enables researchers to identify and synthesize DNA or RNA strands, irrespective of abundance, in a biological sample and is capable of analyzing billions of molecules in parallel, which positions us as both competitive and complementary with other NGS platforms. We believe our technology advantage is a simplified method of quantifying DNA and RNA molecules at single molecule resolution because our platform does not require the routine PCR amplification and library preparation and ligation steps required by most NGS systems, thereby avoiding systematic bias and consequential additional costs. Our current sequencing platform offers advantages, such as the ability of certain samples to reveal previously-unknown molecular profiles, by directly detecting single molecules with little to no manipulation of the original sample. Our tSMS platform then generates data that is highly-accurate and creates reproducible molecular profiles, often providing researchers with new insights into the biology being researched. As supported by multiple peer-reviewed research publications, our tSMS technology platform has assisted medical researchers in uncovering potentially significant DNA and RNA biomarkers for the early detection of diseases.

Our strategy is to integrate the tSMS platform with the development of novel applications across multiple market segments, and to generate revenue through sales of partnership-specific systems and related flowcells and reagents, which we refer to as “sequencing kits”, research services and research grants. We do not offer or sell any products that are founded upon or incorporate our tSMS platform directly to healthcare professionals or consumers. To strengthen our market position, we strive to build and control intellectual property around the instruments, sequencing kits and methods that enable these applications to strengthen our market position. Integral to this strategy will be to work with existing customers in developing new instruments optimized for specific assay and chemistry performance in order to support a wide array of applications. Our target customers are consumers of NGS products and services engaged in research activities and the development of new or improved products, such as academic and government institutions, hospitals and medical centers, pharmaceutical and biotechnology companies, and non-profit research organizations.

Under our current operating model, we expect the revenues we generate from a specific customer to scale as our partnership or collaboration with such customer matures and intellectual property founded on our tSMS platform is developed and sold by such customer. Initially, our customer-specific revenues are typically dependent on the funding of, or research grants obtained by, our partners and their ability to successfully develop novel products. During the early stages of our partnerships or collaborations, we generally derive revenue from research services, grants, and the sale of customized instruments and sequencing kits as intellectual property is developed. Over the longer term, however, we expect to generate increasing revenues from our customers from the sale of application-specific assays or tests that are developed on our platform and for which we will receive royalties, a revenue split or other remuneration for the use of our platform or jointly-developed intellectual property.

Background on Genetic Sequencing

Genetic inheritance in living systems is conveyed through a naturally-occurring information storage system known as deoxyribonucleic acid, or DNA. DNA stores information in linear chains of chemical bases known as adenine (“A”), cytosine (“C”), guanine (“G”) and thymine (“T”). Inside living cells, these chains usually exist in pairs bound together in a double helix by complementary base pairs. A “genome” is an organism’s complete set of DNA, which for humans consists of approximately three billion DNA base pairs. Ribonucleic acid, or RNA, is a molecule used by organisms to convey genetic information. A “transcriptome” is an organism’s complete set of RNA molecules at an active cellular state and includes both protein coding and noncoding RNA transcripts.

Genetic sequencing is the process of determining the order of nucleotide bases (A, C, G, or T) in a sample. This consists of three phases: sample preparation, physical sequencing and analysis. Generally, the first step of sample preparation is either to shear the target genome into multiple small fragments or, depending on the amount of sample DNA or RNA available, amplify the target region using a variety of molecular methods. In the physical sequencing phase, the individual bases in each fragment are identified in order, creating individual sequence reads. The number of individual bases identified contiguously is defined as “*read length*.” The sequencing throughput is generally defined as the product of the number of individual sequence reads and the average read length of the sequence reads. In the analysis phase, bioinformatics software is used to align overlapping reads, which allows the original genome to be assembled into contiguous sequence.

Studying genomes and transcriptomes helps scientists understand the inheritance of biological characteristics, developmental biology and normal and disease states of cells and organisms. Genetic variation accounts for many of the differences between individuals, such as eye color and blood group, and also affects a person’s susceptibility to certain diseases such as cancer, heart disease or diabetes. Genetic variation can also determine a person’s response to drug therapies.

A trend in healthcare is towards ‘personalized medicine’ to enable more accurate diagnosis and treatment through better understanding of each individual patient’s disease. We believe that a greater understanding of the genome will lead to this new healthcare paradigm where diseases are understood at the molecular level, allowing patients to be diagnosed according to genetic information, in many instances earlier and more accurately, and be treated with drugs designed to work on specific molecular targets. The goal is to offer precision-personalized medicine that will identify disease earlier, reduce healthcare costs, and enable more appropriate and effective treatment for better outcomes and quality of life. To date, this has largely been done through genomic testing, which provides information about a patient’s predisposition to disease or likely response to medication, due to each individual’s unique constellation of genes. However, DNA testing is, in most cases, a static readout that does not change through a patient’s lifetime or disease course. It does not provide information about the patient’s current health status. An increasing number of researchers, however, now believe the transcriptome provides dynamic information about the current state of the body that can be used to assess health, to detect early signs of disease and to enable physicians to select the appropriate treatment, monitor response to treatment and detect unwanted side effects.

Cell-free Nucleic Acids as Disease Biomarkers: Most of the DNA and RNA in the body are inside the cells, but a small amount of nucleic acids is also found in biological fluids such as blood, saliva and urine. This material is generally referred to as cell-free DNA (“cfDNA”) and cell-free RNA (“cfRNA”). Analysis of these free-floating molecules can lead to multiple applications such as early disease detection, drug selection and treatment monitoring. For example, large amount of cell-free DNA material might indicate a bacterial infection or sepsis in very early stages. Cell-free DNA is typically derived from chromatin as intact nucleosomes, or histone-bound DNA, which can be analyzed in addition to solely assessing DNA. Another such example is cfRNA analysis for detection, diagnosis and monitoring of malignant diseases such as cancer. The cfRNA transcripts are differentially expressed between normal and cancerous tissues. These transcripts can be used as a reliable biomarker for cancer screening and diagnostic applications. Analysis of cfRNA can be used to measure dynamic changes in the gene expression, allow oncologists to evaluate disease status, predict outcomes from anti-tumoral therapies and monitor the disease after treatment.

Sequencing Technologies: There are different sequencing technologies available for sequencing genetic material, each producing the sequence data in a unique format. Some of the technologies produce millions of sequence reads with a very short-read length, generally less than 300 nucleotide bases. These technologies are generally referred as short-read NGS platforms. Other technologies produce several thousand sequence reads of a very long-read length, generally more than 1,000 nucleotide bases. These technologies are generally referred as long-read NGS platforms. Both, the short- as well as long-read NGS technologies have their advantages in various settings. For *de novo* assembly of genomes and long RNA transcripts, the long contiguous reads from the long-read NGS technologies are preferred. Generally, short reads can be used to further fill in gaps in the data from longer read technologies. For molecular counting application, a large number of independent reads from short-read NGS technologies are preferred. Different genes are present in varying amounts in biological samples, and the success of the technique is highly-dependent on the dynamic range of the detection technology.

Market Opportunity

The market for our products and services is segmented into two major categories, DNA NGS and RNA NGS, which, according to The Insight Partners, accounted for a combined addressable market opportunity of approximately \$1.03 billion in 2019 that is projected to grow to \$5.26 billion by 2025 at a CAGR of 31.3%.

DNA NGS market opportunity: According to The Insight Partners *DNA NGS Market Report 2019*, the global DNA NGS market is projected to grow from \$6.82 billion in 2019 to \$22.72 billion in 2025 at a CAGR of 22.2% from 2019 to 2025. Our customers in the DNA NGS market largely consist of academic and research institutes and forensic labs. Collectively, academic and research institutes and forensic labs, pathology labs and diagnostic centers represent a projected 58.4% of the end-user market share in 2019. The versatility of the tSMS platform can be applied across our near-term target segments of drug discovery, precision medicine and other novel applications. We intend to focus our commercialization efforts on academic and research institutes and forensic labs in North America and Europe, and will eventually expand our efforts to the Asia Pacific region. North America and Europe represented 69.9% of the global market in 2019. Our targeted end users, applications and regions for DNA NGS offered an addressable market opportunity of \$0.74 billion in 2019 that is projected to grow to \$4.10 billion in 2025 at a CAGR of 33.0%.

RNA NGS market opportunity: According to The Insight Partners *NGS-based RNA Seq. Market Report 2019*, the global RNA NGS market is projected to grow from \$1.63 billion in 2019 to \$4.96 billion in 2025 at a CAGR of 20.4%. We intend to leverage our simplified workflow, which reduces bias and misrepresentation caused by various enzymatic steps that other technologies utilize, to accelerate market penetration. The RNA NGS market can be segmented by products and services, end users, applications and sequencing technologies. Research and academic centers, pharmaceutical and biotech companies, and pathology labs forensic labs and diagnostic centers represented a projected 76.7% share of the end users in 2019. Our simplified and mature RNA sequencing approach will facilitate a broad application pool across diagnostics, drug discovery, precision medicine and biomarker discovery field. We will offer RNA sequencing platform and sequencing kits, sequencing services and data analysis products featuring our tSMS technology to such potential customers. Furthermore, we intend to focus on commercialization of our products in North America, Europe and Asia Pacific regions, which collectively accounted for 81.2% of the global market geographically in 2019. Our targeted end users, applications and regions for RNS NGS offered an addressable market opportunity of \$0.29 billion in 2019 that is projected to grow to \$1.16 billion in 2025 at a CAGR of 26.2%.

Limitations of Existing Technologies

There are multiple short read and long-read NGS technologies available in the market that partially address the need for accurate and sensitive analysis of genetic information. These technologies can further be classified based on the resolution of the technology as single-molecule sequencing technology and amplification-based technologies. Most single-molecule sequencing technologies do not require amplification, though many of the long-read technologies still require complex sample manipulation prior to sequencing. This is especially true for sequencing of RNA molecules. Over the past two decades, researchers and clinicians have used these technologies to gain a deeper understanding of nucleic acids, to study biomarkers associated with disease, to identify molecules for new drug discovery, to create novel applications for early screening and diagnosis, and more recently to create genome-editing techniques. While researchers are making progress on various fronts by utilizing a combination of these technologies, there remains a wide gap between the needs of the research community and the capabilities of existing sequencing tools. This gap is hindering the advancement of scientific research. The inherent limitations of current technologies are summarized below:

- **Biased results:** Short-read NGS technology typically requires a large number of DNA molecules during the sequencing process. To generate enough DNA molecules, an amplification step is required during sample preparation. This amplification process can introduce errors known as amplification bias. The effect of this bias is that resulting copies are not uniformly representative of the original template DNA, causing skewed data representation in the final results.
- **Lower sensitivity:** In cases where the original template DNA contains regions of relatively high G-C content or relatively high A-T content, the amplification process tends to under-represent these regions. As a result, these regions, which may contain entire genes, can be completely missed. The non-linear nature of the amplification thus limits its ability to detect subtle changes in the genetic signature.

- **Inefficient library preparation:** Many of our competitors use systems requiring multi-step sample preparation protocols to prepare sample libraries before sequencing. This library preparation technique is inefficient, capturing only a fraction of the informative input material. The process selectively captures the molecules that are present in large quantities while losing lower frequency molecules, thus not producing a true representation of the input material. The library preparation protocol limits the minimal amount of input sample. The library preparation steps also add significant burden on the sample preparation.
- **Inadequate throughput:** Applications such as transcriptome profiling, gene expression and biomarker discovery require accurate quantification of data. The long read single molecule technologies fall short due to the smaller number of strand throughput required to substantiate the presence or absence of a biomarker in a specific sample. The short-read amplification technology is limited due to a skewed data representation caused by the non-linear amplification bias present in the workflow.

Our Technology Solution

Our tSMS platform offers a single molecule solution for DNA and RNA sequencing by performing detection of nucleic acids without the need for complex sample manipulation. Researchers using our platform can analyze many billions of single molecules in a single experiment and still generate highly accurate and reproducible data. We believe our technology's critical advantage over other technologies is because our platform does not require the routine library preparation steps, such as PCR amplification and ligation, necessary for use with most NGS systems, thereby avoiding systematic amplification bias. RNA sequencing on our platform detects transcripts regardless of abundance and with high accuracy in quantifying gene expression changes associated with certain disease as well as detecting subtle changes in RNA transcript levels that are undetectable with other methods.

Our single molecule platform is unique because it combines a proprietary fluorescence-based optical detection apparatus with a precision microfluidics and thermal control system to perform sequencing-by-synthesis, as illustrated in Figure 1 below.

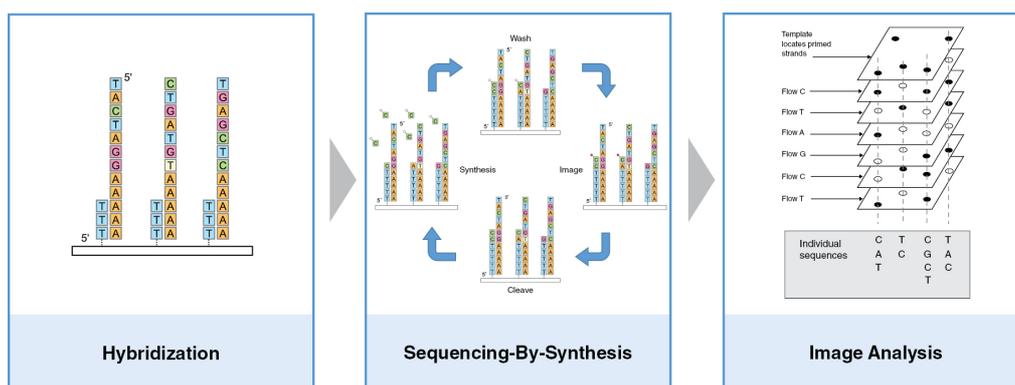


Figure 1. tSMS Technology Workflow

Our platform typically derives sequencing information directly from the sample itself, not a copy of the sample. It does not require amplification at any stage of the process and offers simple, straightforward sample preparation protocols. The technology uses a single-stranded DNA and RNA material with lengths that range from less than 20 bases to more than 1000 bases as an input. The platform then captures the material on a glass surface and uses a patented fluorescence-based optical detection apparatus combined with a precision microfluidics system to perform a sequencing-by-synthesis reaction on the input sample.

The single molecule fluorescence signal from millions of individual strands is captured by images using a high-sensitivity camera during multiple cycles of nucleotide incorporation. Our powerful image analysis system processes these images to produce the sequence data as an output. The output data contains millions of individual unique sequences with the average read length of between 35–60 nucleotide bases, with a range of 20–100 nucleotide bases. This length is sufficient to allow unambiguous identification of the origin of each sequence.

Our system still requires isolation and preparation of DNA or RNA samples; however, our system is adaptable to most purification and preparation kits and techniques that are currently available in the market and no additional or special steps are required to prepare the samples for sequencing.

The single molecule resolution of the sequence data in association with a sub-100 nucleotide base read length positions our platform as the only short-read single molecule sequencer commercially available in the market. The amplification-based short-read technologies are already helping the scientists in the fields of research, diagnostics and therapeutics. By giving the short-read technology the power of single molecule resolution, we believe our tSMS technology offers critical advantages over existing technologies, including:

- Minimal Sample Preparation.** Our tSMS platform offers a simple sample preparation process. The DNA strands are cut in shorter sizes, converted into single strands, and then tagged with a universal surface capture primer. By avoiding the complex multi-step library preparation method, the sample integrity is preserved, and the bias and errors in the sequence data output exhibited by other methods are avoided. The simplicity of our sample preparation workflow and its effect on the output data variance, compared to NGS data produced by an Illumina system, is illustrated in Figure 3 below. [van den Oever et. al. (*Clinical Chemistry*, April 2012)].

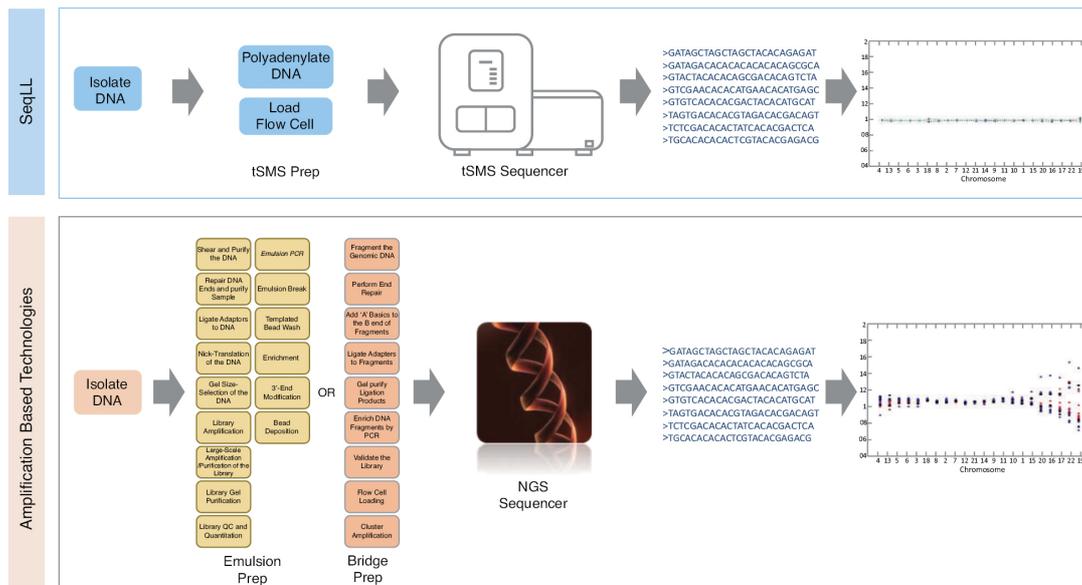


Figure 3. tSMS vs Amplification-based Technologies Workflow

- Greater Sensitivity.** Our tSMS platform offers a high level of sensitivity as each strand is identified and synthesized irrespective of its abundance in the sample. In the existing amplification-based technologies, low expressing transcripts are typically masked due to preferences and may be missed or have their numbers minimized in the final data analysis. The simplified sample preparation along with single molecule resolution facilitates the unbiased, proportionate representation of input sample, even of the low expressing transcripts and constructs. This allows for obtaining more accurate information earlier, and for clinical treatments or decisions to be made sooner. Figure 4 below illustrates that the tSMS platform identified low-expression transcripts missed by the standard PCR-based methodology when

using Illumina. The lowest expressed quartile of transcripts was detected with our tSMS technology at a 7.10x rate compared to a leading NGS platform [Sam LT, Lipson D, Raz T, et al. A Comparison of Single Molecule and Amplification Based Sequencing of Cancer Transcriptomes. *PLoS One*. 2011].

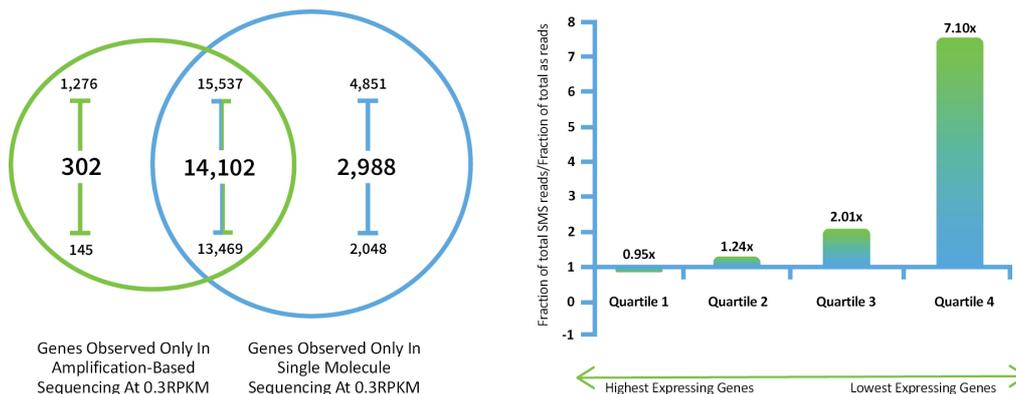


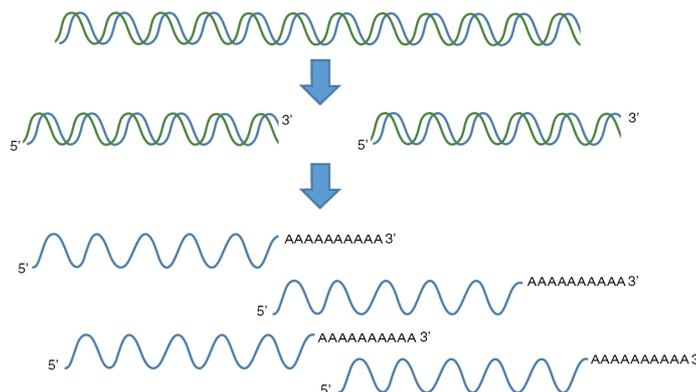
Figure 4. tSMS Improves Detection of Lowest Expressed Genes

- High Accuracy.** Our tSMS platform provides an accurate set of data and results as well as a broader range of molecules to be evaluated. The ability to count each individual molecule, combined with simplified sample preparation and greater sample sensitivity, yields an accurate quantitative representation of sample in the final data. Our technology has been demonstrated to produce robust accurate short reads for a variety of applications.
- Seamless Flexibility.** Our tSMS platform provides flexibility in two main aspects — throughput and applications. The tSMS platform has the ability to scale the throughput across a range of small to large projects. The programmable instrument workflow and modular design of sequencing kits provide flexibility to choose the sample coverage and read length required for the final data. The simplified sample preparation allows for analysis of any genetic material that can be attached to a glass surface.

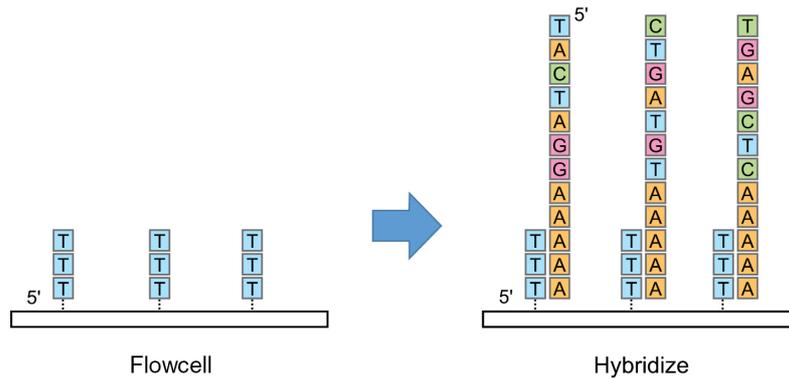
Our Gene Sequencing Methodology

The patented tSMS technology is the essence of our tSMS platform. The gene sequencing methodology takes genetic material as input and produces sequence data as an output through sequentially processing the following five major steps.

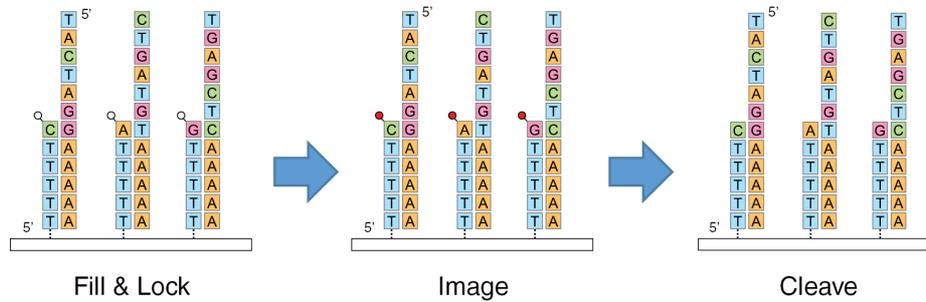
- Sample preparation:** A double helix strand is cut into fragments of 100–200 nucleotides in length. In the case of cfDNA and cfRNA material, this step is not necessary as cell-free strands are generally short and fit the profile of the input material. The strand fragments are then denatured to a single strand, and a poly-A universal priming sequence is added to one end of each strand as shown in the following figure.



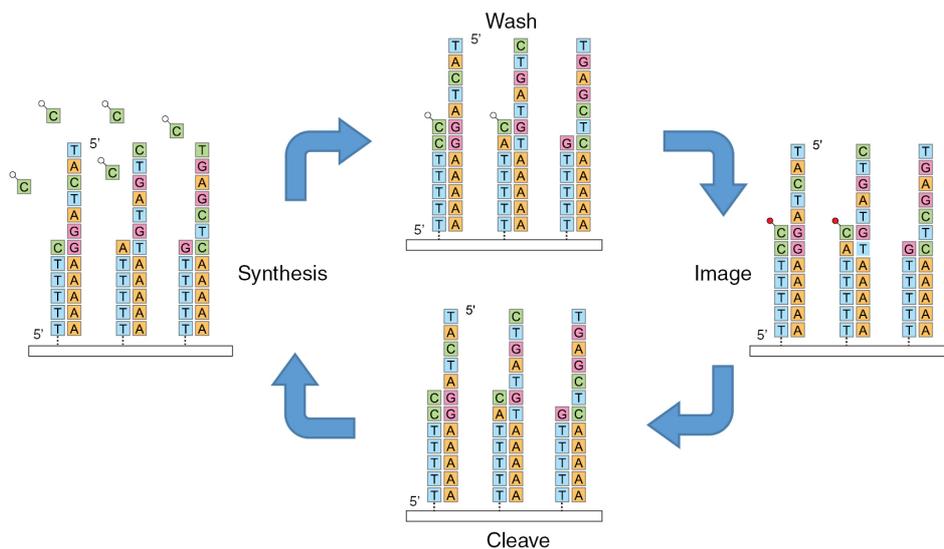
2. **Sample loading:** The strands are hybridized in a flowcell with billions of universal oligo T capture sites mobilized on the flowcell surface. The tSMS method typically utilizes a dT50 primer to initiate sequencing from a 3' poly-A tail, although other capture primers may be used to increase the specificity of sample hybridization.



3. **Template registration:** Once hybridized, a “Fill & Lock” step fills up the rest of the open bases from the poly-A tail followed by the addition of fluorescently labelled nucleotides to the start of the strand. A laser illuminates the flowcell and the camera records the location of each captured sample strand. The flowcell is moved in sequential steps to allow the camera to cover its entire active area. The dye molecules are then cleaved and washed away.



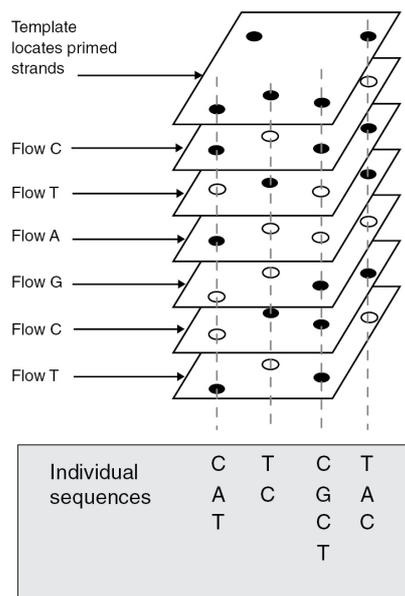
4. *tSMS sequencing-by-synthesis:*



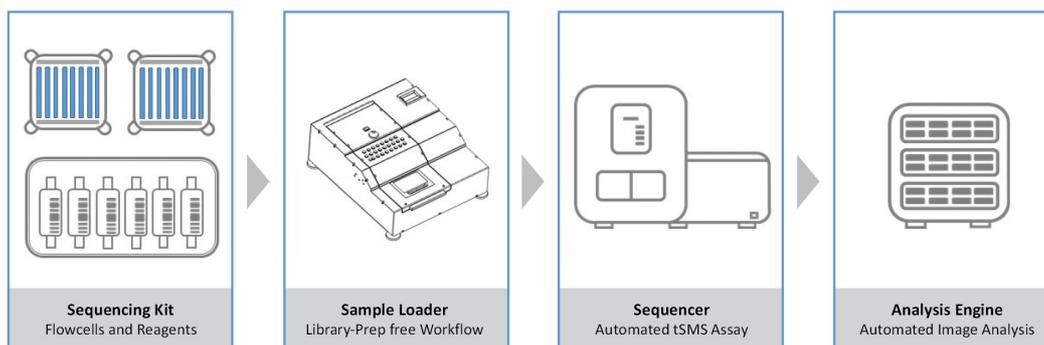
- Synthesis:** DNA polymerase enzyme and the first of the four types of novel fluorescently labelled nucleotides are added. If the nucleotide is complementary to the next base in the template strand, the polymerase will add it to the primer strand. The nucleotides are designed to inhibit the polymerase from incorporating more than one base at a time on the same strand.
- Wash:** Excess polymerase and unincorporated nucleotides are then washed away. This step ensures that only the incorporated nucleotides are available for fluorescence imaging.
- Image:** The narrow bandwidth laser illuminates the flowcell surface to excite the fluorescently labelled nucleotides. The camera records the locations where fluorescently labelled nucleotides were added.
- Cleave:** The fluorescent dye molecules are then cleaved from the labelled nucleotides and washed away. This step ensures that these molecules are fluoresced only for that particular nucleotide addition cycle.

The process is repeated with each of the four types of labelled nucleotides until a desired sequence length is reached. As an example, repeating this cycle 120 times adds an average of more than 33 nucleotides to the primer strand. In sequencing, this is known as the “read length.”

5. **Data processing:** The image analysis computer analyzes the series of images from each cycle and determines the sequence of bases in the template strand. The sequence is “read” by correlating the position of a fluorescent molecule in its vertical track with the knowledge of which base was added at that cycle. The sequence data is packaged in standard sequencing data formats for further bioinformatics analysis.



Our True Single Molecule Sequencer (tSMS)



Described above is our gene sequencing methodology using our tSMS single molecule sequencing platform. It combines a simplified operation with powerful capabilities to directly sequence original samples of RNA and DNA consisting of major components:

1. **Sequencing Kit:** The flowcells and reagents are the major components of a sequencing kit that the instrument needs at the start of every new run. The custom flowcell features 25 discrete flow channels, and each channel of the flowcell has millions of capture probes deposited on the cover glass. The sequencing samples are loaded into the flowcell channels using the sample loader. The sequencing run can sequence up to two flowcells in a single run. The reagent kit for the sequencing run consists

of custom pre-packaged bottles that store proprietary tSMS chemistry reagents and wash buffers for the system. All of the flowcells and reagent kits are barcoded, so the sequencer can scan and store the barcodes as a part of the experiment setup procedure.

2. **Sample Loader:** The sample loader facilitates loading the billions of tailed single strands onto the glass surface of the standard 25 channel flowcell. A temperature-controlled chamber improves the hybridization efficiency and houses a mechanism to hold a standard flowcell used in the system. The proprietary sample loading block design helps to keep the transfer volume to near zero microliter, while the system offers precision control of loading the sample in 25 discrete channels without any cross-contamination. The input material volume for the sample loader can be as little as 20 microliters.
3. **tSMS Sequencer:** The sequencer accepts up to two flowcells for a sequencing run, allowing sequencing of up to 50 individual samples in a single run. The benchtop sequencer is a fully-automated device that combines a Total Internal Reflection Fluorescence (TIRF) microscopy technique with a high-precision, temperature-controlled microfluidics system. The microfluidics system houses the reagent kit required to perform tSMS chemistry, and uses high-precision pumps and valves to formulate the chemistry just-in-time for delivery to the flowcell chamber during each chemistry cycle. The two flowcell design maximizes the machine utilization by performing the chemistry cycle on one flowcell while the other flowcell is going through the imaging cycle, and vice-a versa. The flowcells are mounted on a high-speed, high-accuracy multi-axis stage that moves the flowcell along the channel with nanometer grade precision. The high-power optics system consists of a narrow bandwidth laser to provide the excitation signal, while the high-fidelity imaging system uses a highly-sensitive camera for capturing the single molecule signal emitted by the fluorophores. All of these subsystem operations are integrated and controlled by an on-board computer in a completely automated fashion over the course of the run. A simple touch screen based graphical user interface walks the user through an intuitive run setup. A typical run on the sequencer captures three to six million images containing information about billions of individual single molecules in the strands.
4. **Image Analysis Engine:** The image analysis engine processes the images captured by the sequencer camera, aligns them with the template image at individual position, and creates the sequence data file to be used for further bioinformatics analysis. It features a high-power CPU array with large storage capacity hard drives specifically designed for intensive image analysis and storage purposes. The image analysis engine runs parallel to the camera, processing the images as soon as the camera starts imaging the flowcell. The image analysis engine software monitors the instrument status and automatically uploads the sequence data at the end of the run at a user-configurable network location.

The instrument has a web-based interface for remote monitoring that updates the key sequencing metrics and the instrument status in real time. The database system of the instrument stores the detailed logs for both record keeping and troubleshooting purposes.

Markets for Our Technology

The initial target market for our instruments and research services has been the life sciences research and development market where we provide solutions for a variety of applications, including biomarker discovery and diagnostic assay developments. This market includes laboratories associated with universities, scientific research centers, government institutions, and biotechnology and pharmaceutical companies.

Our tSMS technology platform produces data with potential diagnostic implications, detecting biomarkers for cardiovascular diseases and various types of cancer, and offers an optimal solution for use in sequencing applications. We anticipate using these strengths to capture a portion of the growing multi-billion dollar NGS market. We strive to build and control intellectual property around the instruments, sequencing kits and methods that enable these applications to strengthen our market position. The major consumers of the NGS include academic and government institutes, hospitals and medical centers, pharmaceutical and biotechnology companies, non-profit research organizations and agrigenomics organizations.

Introductions of new technologies and products, while positive to the overall development of these markets, may result in greater competition for the limited financial resources available. There are a number of emerging markets for sequencing-based technologies that represent significant potential opportunities for us, such as but not limited to:

- Life sciences research and development:** NGS technologies are accelerating the discovery and development of more effective new drugs. The complex nature of biological pathways, disease mechanisms and multiple drug targets requires an accurate, unbiased, and sensitive molecular counting platform. Single molecule sequencing, with its unparalleled quantitative accuracy in large-scale expression profiling could enable high-throughput screening of promising drug leads. During clinical trials, our technology could potentially be used for companion diagnostics to generate individual genetic profiles that can provide valuable information on likely response to therapy, toxicology or risk of adverse events. The tSMS platform may also enable more precise selection of patient pools and individualization of therapy.
- Liquid biopsy:** Liquid biopsy is emerging as a simple and non-invasive alternative to the traditional tissue biopsy approach for disease screening and monitoring. A simple draw of blood vial contains millions of tiny fragments of cell-free DNA/RNA material with lengths on the order of 100–200bp, which carry informative signatures of cancer and other life-threatening diseases even in a very early stage of the disease progression. With its quantitative accuracy, simple sample preparation methodology, and its ability to accurately sequence fragmented short molecules, our single molecule sequencing offers an excellent solution for liquid biopsy.
- Infectious disease:** Infectious diseases are disorders caused by bacteria, viruses and fungi. These organisms contain DNA and RNA that act as infectious agents to transmit disease from person to person, by insect or animal, or through food and environmental means. The detection and sequencing of the DNA and RNA from pathogens provides medically actionable information for diagnosis, treatment and monitoring of infections. Accurate sequence information could also help to predict drug resistance.
- Clinical diagnostics:** Our amplification and ligation free sequencing method allows us to identify subtle changes in the RNA transcript levels that are undetectable with other methods presumably due to bias and loss of low-level transcripts inherent to the other technologies. The power of our tSMS technology can help to address the large unmet need for biomarker discovery to diagnose diseases such as cardiovascular diseases and cancer at very early stages. The potential of our technology for bio-marker discovery is illustrated in Figure 5 below, where tSMS RNA-seq was utilized to identify RNA-based gene expression changes associated with ADHD [McCaffrey TA, St Laurent G 3rd, Shtokalo D, et al. Biomarker Discovery in Attention Deficit Hyperactivity Disorder: RNA Sequencing of Whole Blood in Discordant Twin and Case-controlled Cohorts. *BMC Med Genomics*. 2020].

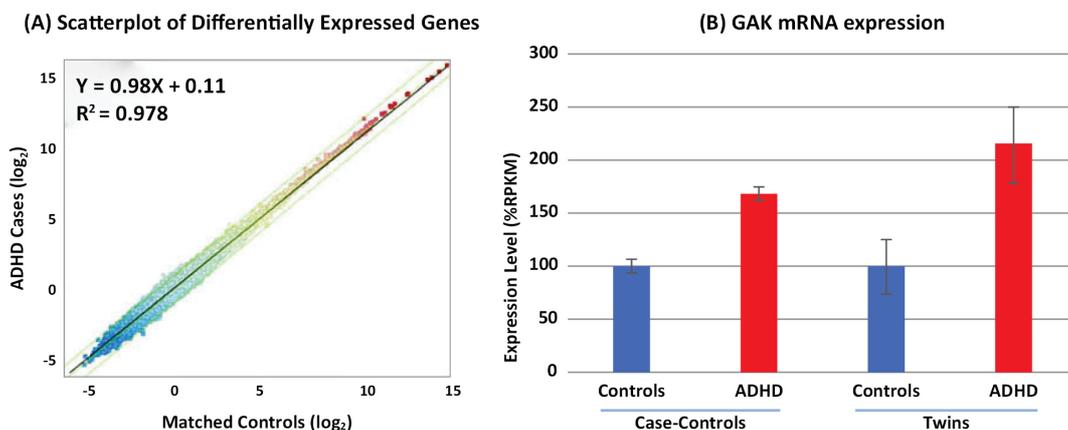


Figure 5. Biomarker Discovery in ADHD using tSMS RNA-seq

- Microbiome analysis:** Microbial communities in and on the body show uniform bacterial diversity in healthy individuals. Drugs and diet can disrupt the microbial diversity, and thereby can affect disease progression and treatment efficacy. Our technology can accurately quantify the gene signature for all bacteria present and capture a real-time snapshot of the microbiome. This data can be used by physicians for disease treatment by applying methods to encourage growth of beneficial microbes and eliminate harmful microbes.

These examples of emerging markets for sequencing-based technologies represent significant potential opportunities for us. The development of these markets is subject to variability driven by ongoing changes in the competitive landscape, evolving regulatory requirements, government funding of research and development activities, and macroeconomic conditions. Given the ability of the tSMS platform to sequence nucleic acid fragments as well as to detect post-translational modifications within larger chromatin molecules, we believe our technology is uniquely positioned to produce data from molecules at both ends of the single molecule nucleic acid spectrum. This concept, and the technology leaders for each single molecule market segment, is illustrated in Figure 6 below, with our potential applications highlighted in blue font.

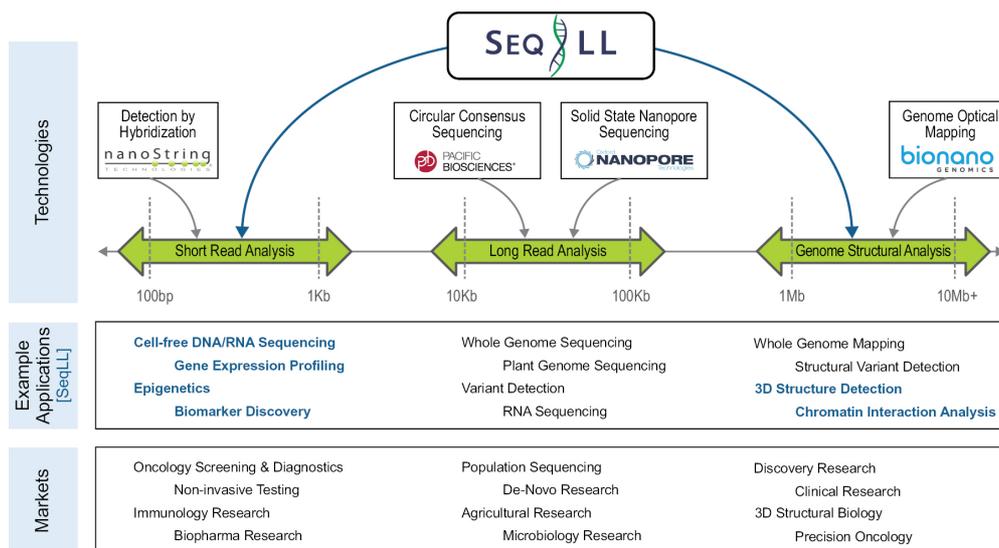


Figure 6. Illustrative Single Molecule Nucleic Acid Landscape

Our Business Strategy

Our mission is to empower researchers with improved genetic tools that enable scientists and physicians to better understand the molecular mechanisms of disease and the underlying biological systems. This knowledge is essential to the continued development of new approaches and breakthroughs in genomic medicine that address critical concerns relating to today’s precision medicine efforts.

Our strategy is to integrate our tSMS platform with the development of novel applications across multiple market segments, and to generate revenue through partnership-specific system and sequencing kit sales, research services and research grants. We strive to build and control intellectual property around the instruments, sequencing kits and methods that enable these applications to strengthen our market position. Integral to this strategy will be to work with existing customers in developing new instruments optimized for specific assay and chemistry performance

in order to support a wide array of applications. Figure 7 below summarizes three priority areas of research and development for current and potential collaborations, which we expect to fund with a portion of the net proceeds of this offering.

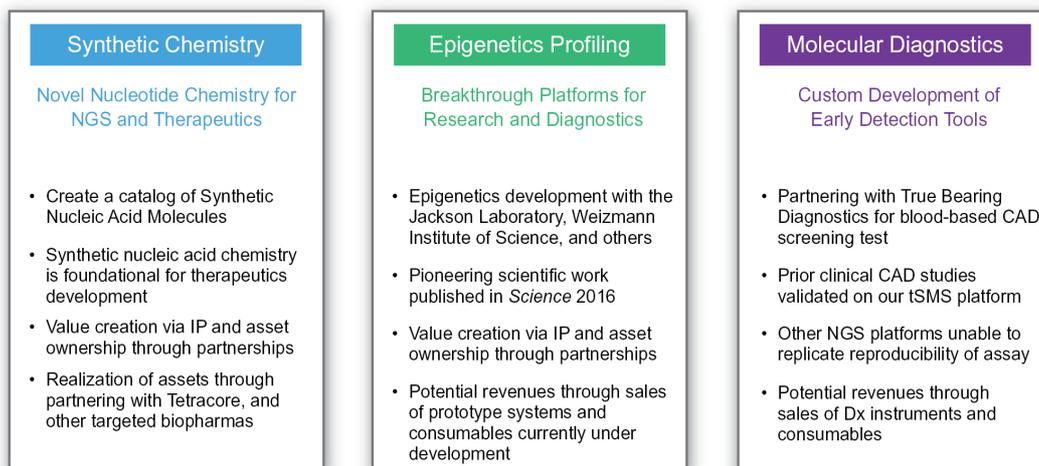


Figure 7. Three Priority Areas of Research and Development

Our target customers are consumers of NGS products and services engaged in research activities and the development of new or improved products, such as academic and government institutions, hospitals and medical centers, pharmaceutical and biotechnology companies, and non-profit research organizations.

We have generated only nominal revenues to date from our current operating model and we do not expect our revenues to scale significantly until one or more of our customers or third-party partners or collaborators has developed application-specific assays or tests for which our platform serves as a foundation. As a result, we believe our ability to continue to operate at current levels is dependent on the success of this offering. Over the longer term, we expect to generate revenues from our customers, partners and collaborators through a combination of product sales, research services and research grants. We plan to expand these revenues from recurring and prospective clients by the following key strategies:

- Provide the scientific community with a combination of research services and NGS instrumentation to serve markets that we believe are inadequately addressed by existing technologies.
- Assist in the development of new classes of RNA-based diagnostics tests.
- Collaborate with researchers to enhance pharmacogenomics and biomarker discovery.
- Support drug developers seeking a better understanding of the side effects of their new drugs.
- Continue to innovate and develop new aspects of our products and technology, applications and instrumentation through scientific collaborations, including grants.
- Leverage our expertise and the broad applicability of our tSMS platform to grow into new markets through strategic collaborations, partnerships, existing data sets, and customers.
- Maintain a strong culture and network of technical resources while continuously attracting new talent to build an industry leading single molecule solutions company.

We expect to use a portion of the net proceeds of this offering to support our research and development activities and to improve and update our tSMS platform to develop additional applications in support of our existing partnerships and collaborations. While we anticipate increased revenues as a result of those efforts, we are planning to raise additional funds following this offering to support our existing partners and collaborators and to fund the initial costs of new relationships.

Our Customers and Collaborators

Our customer base is focused on academic research, biomarker discovery, and molecular diagnostic product development. These customers over the years have produced scientific achievements through collaborative research efforts. The majority of our current customers are early adopters of genomics technology including tSMS. A significant portion of the funding for these developing technologies has historically come from research grants provided by government agencies and non-profit research centers. We often collaborate with customers to drive innovation in the field of genomic sciences through grant funded research activities. Our key collaborators and our current activities are highlighted below:

Bernstein Laboratory

We have worked closely with the lab of Bradley Bernstein, M.D., Ph.D. at Massachusetts General Hospital and Harvard Medical School to address fundamental questions in chromatin biology and epigenetic regulation. Dr. Bernstein is also the founder and Director of the Broad Institute Epigenomics Program. Scientists from the Broad Institute have used antibody-based detection coupled with tSMS to begin decoding a dual-marking system in modified histones that signals for a gene to be activated or repressed. Early results, published in *Science*, suggest differentiated cells exhibit different patterns of “bivalent” markings than embryonic cells. Our collaboration encompasses technology development, single-cell RNA and DNA analysis, and the creation of novel intellectual property. In addition to completing NIH grant funded research activities, we have provided Dr. Bernstein with tSMS systems and onsite support. We have submitted a technology development manuscript for peer review at a leading scientific journal and expect to provide the Bernstein Lab early access to new prototype systems in the second half of 2021.

Ting Laboratory

We have been a long-time research collaborator with David Ting, M.D., Assistant Professor, Medicine at Harvard Medical School and a leading member at the Dana Farber/Harvard Cancer Center in using tSMS to better understand cancer. His research is focused on the role of non-coding RNA transcription in cancer as it relates to tumorigenesis and as novel biomarkers. In this research area, the Ting Laboratory was first to discover aberrant overexpression of pericentromeric RNA repeats by RNA-seq using tSMS, which were found to play a significant role in pancreatic cancer and other epithelial cancers [Bersani, *PNAS*, December 2015]. This discovery resulted in new intellectual property related to pancreatic cancer biomarkers and the subsequent founding of Rome Therapeutics, an early-stage company focused on unlocking the repeatome to discover powerful new classes of medicines for cancer and autoimmune diseases. We have provided Dr. Ting with tSMS systems and onsite support, research services, and access to sample preparation methodologies.

The Jackson Laboratory for Genomic Medicine

Led by Chia-Lin Wei, Ph.D. with The Jackson Laboratory (“JAX”) and supported by a recent four-year, \$2.3 million grant from the National Institute of General Medical Sciences, we are assisting in the development of new methods for chromatin interaction analysis in single nuclei, with single-molecule resolution. JAX has stated that preliminary results indicate that, once fully developed, the methods under development have the potential to exceed previous methodologies and to revolutionize the field of three-dimensional (“3D”) genome biology. Our research grant efforts, including instrument prototype and sequencing kit development, are continuing and will focus on generating genome-wide, single-molecule chromatin interaction maps in a variety of biological systems and uncovering the structural detail of multiplex chromatin loci that are currently unresolvable given standard NGS. We expect to provide JAX early access to newly-developed prototype systems in the second half of 2021.

Weizmann Institute of Science

In partnership with the laboratory of Efrat Shema, Ph.D., we have recently developed and applied innovative single-molecule technologies to gain a deeper understanding of chromatin regulation. We are working to establish robust single-molecule systems for genome-wide profiling of combinatorial chromatin and DNA modifications, as well as development of novel therapeutic and diagnostic tools. We have multiple manuscripts currently submitted for peer review at leading scientific journals and expect publication in the second half of 2021. We have provided the Weizmann with access to prototype sequencing systems, sequencing kits, and sample preparation methodologies.

True Bearing Diagnostics, Inc.

We have participated in a research collaboration with Timothy McCaffrey, Ph.D. of The George Washington University's Center of Genomic Medicine and True Bearing Diagnostics, Inc, performing tSMS on whole-blood RNA to identify transcripts associated with coronary artery disease ("CAD"). In comparison to other platforms that include NGS technologies, only our tSMS platform could consistently identify the novel mRNA signature in CAD patients. We believe this collaboration will provide the blueprint for a diagnostic test that could significantly reduce the over one million U.S. catheterizations that are performed annually at a cost of approximately \$20 billion per year. A scientific manuscript detailing biomarker discovery efforts for CAD is currently in preparation and expected to be published in a peer reviewed journal in the first half of 2022. We have provided True Bearing Diagnostics with research services and access to sample preparation methodologies. Potential future work includes the development of a CAD-focused clinical system for regulatory clearance.

Tetracore, Inc.

Tetracore, Inc. focuses on antibody-based and nucleic acid-based detection reagents and technologies, and contracts with the U.S. Government for the development of real-time PCR diagnostic tests for biological warfare threat agents, novel nucleic acid extraction procedures, and specialized nucleic acid products. We have provided Tetracore with tSMS systems and onsite support. We are actively preparing applications for submission in the second half of 2021 to the NIH, DARPA and other funding agencies regarding the use of our technology in the development and production of detection tools. These potential products, including non-NGS applications, are for clinical, animal health, and domestic preparedness testing.

Future Products

We expect to partner or collaborate with biotech and pharma companies to develop a clinical-grade tSMS sequencer for use with one or more diagnostic tests. We intend for our partners to commercialize diagnostic tests for applications for which the tSMS platform offers accurate diagnostic capability, such as non-invasive prenatal testing for early pregnancy and high-body-mass-index-mothers, liquid biopsy for oncology applications, microbiome analysis, and transcriptome-based diagnostics for cardiovascular disease, infectious disease and others. We will look to increase industry visibility and expand our reach globally for both sequencing services and instrument sales through strategic customer relationships and partnerships with larger organizations that can increase global support, supply and distribution. Through those partnerships, we plan to identify new, high-value, cutting-edge applications that are uniquely enabled by our amplification-free, direct DNA and RNA sequencing technology.

The accuracy, sensitivity and simplicity of the tSMS platform allows the technology to be applied for developing assays and instruments used for quality control of manufactured therapeutic products, including gene therapy and vaccine technologies. We plan to explore commercial-stage partnerships with therapeutics companies interested in accessing our tSMS platform.

As our partners or collaborators expand their product lines to address the diagnosis of disease, regulation by governmental authorities in the United States will become an increasingly significant factor in development, testing, production and marketing. Products developed for the diagnostics market, depending on their intended use, may be regulated as in vitro diagnostics by the FDA. Each medical device to be distributed commercially in the United States will likely require either 510(k) clearance or approval of a pre-market approval application (PMA) from the FDA prior to marketing the device for in-vitro diagnostic use. Clinical trials related to regulatory submissions may take years to complete and represent a significant expense. The 510(k) clearance pathway usually takes from three to 12 months, but can take longer. The PMA pathway is more costly, lengthy and uncertain, and can take from one to three years, or longer.

We have not sought FDA approval of our sequencers because to-date we have marketed them for research purposes and not for clinical diagnostics. Through our partners or collaborators, we will likely need to assist in pursuing regulatory approvals from the FDA when they attempt to enter the diagnostics market, which is expensive, involves a high degree of risk and there is no assurance that we will be able to develop a commercially viable product. Even if the products under development are authorized and approved by the FDA, our partners or collaborators must still meet the challenges of successful marketing, distribution and customer acceptance. We do not intend to use proceeds from this offering to pursue FDA approval. If significant funds are required from us in seeking to obtain any FDA approval, we intend to raise additional funds for such purpose prior to pursuing FDA approval.

Marketing, Sales, Service and Support

Our business model is focused on offering our customers and collaborators access to our tSMS technology in order to drive comprehensive and reliable solutions that enhance acceptance, customer loyalty and confidence, revenue growth and shareholder value. We plan to focus on addressing specific markets for which there are not currently adequate solutions. This will require education and demonstration of added value by helping customers and collaborators meet program timelines, providing data that supports their programs, and implementing custom solutions to meet each customer's specific objectives. We currently generate revenue by selling to existing customers and through collaborative, research-focused efforts that create additional sales and growth opportunities.

To achieve recurring growth for our research services revenues and drive new value creation, we are implementing the following initiatives to increase market awareness of the tSMS platform:

- Defining our value proposition in terms of commercial value and solution to customer needs, as related to platform flexibility, speed to solution, and comprehensive quality of the genetic information provided.
- Creating new literature that highlights our technology, instruments and capabilities. This includes brochures, white papers, application notes, case studies, and solution's value proposition marketing material.
- Implementing new customer facing programs including trade show participation, posters and presentations to showcase the solutions for commercial needs, and attending scientific conferences that publish the research data from the tSMS platform.
- Expanding visibility in segment verticals with segment organization participation and by creating integrated training and education programs as a part of instrument sales and the training process.
- Furthering research collaborations with key opinion leaders to address critical, high potential needs and publish the findings in the peer-reviewed scientific journals.

We believe this approach maximizes value to our customers and shareholders by supporting the largest possible number of customers.

Manufacturing

We have the capability to manufacture the required sequencing kits and instrumentation at our own manufacturing facility. We believe manufacturing all system components internally results in greater trade secret protection for our proprietary formulations and mechanics, a higher degree of customer satisfaction in our research business, and lower production costs. In the future, we may outsource some of the non-proprietary reagents and basic instrumentation sub-assemblies for parallel inventory production ramp-ups. Relationships to various contract manufacturing organizations have already been established and we believe several are prepared to provide these services once production demand exceeds internal capacity.

Our current manufacturing staff is comprised of a team of engineers and technicians who each has more than 10 years of experience with the tSMS product line. The manufacturing team has deep experience with the tSMS platform and has the ability to adapt to future needs on both the hardware and sequencing kits. In addition, this group has experience in FDA product clearance and working in an FDA regulated environment. The team has been involved in manufacturing commercially available tSMS instruments since its original design and subsequent production in 2008.

We are planning to establish a controlled manufacturing process and environment, and to implement standards according to the International Organization for Standardization (ISO), 5S lean manufacturing methodology, and other lean techniques. We also plan to create work cells for efficiency and material control for both sequencing kits and instrumentation. Implementation of quality assurance in manufacturing documentation and processes is one of our top priorities as we continue the path toward releasing a clinical grade tSMS sequencer that is compatible with the FDA clearance process.

We believe our current facilities are adequate and have additional room to expand to meet our manufacturing needs for at least the next two years. Beyond that, we may be required to lease additional space to incorporate additional manufacturing, lab, test and assembly capabilities.

Research and Development

Our research and development efforts focus on maintaining our advantage in single molecule sequencing. These efforts leverage our team's involvement and continuing development of the tSMS technology for over a decade. The tSMS technology blends a number of scientific disciplines, including optics, micro-fluidics, biochemistry and molecular biology, systems engineering, and bioinformatics. Over the years, we have continuously established strong relationships with technology leaders and leading academic centers that augment and complement our internal research and development efforts.

Some of our research and development accomplishments include:

- Production of a second generation tSMS sequencer in benchtop form-factor;
- Optimized sample preparation, flowcell and reagent tSMS processes;
- Innovated machine-learning methods based image analysis algorithms;
- Co-authored multiple publications in scientific journals; and
- Received multiple National Institutes of Health grant awards for technology development.

We plan to continue our investment in research and development to enhance the performance and expand the application base of our current products, and to introduce additional products based on our technology. In addition, our engineering team will continue their focus on increasing instrument component and system reliability, reducing costs, and implementing additional system flexibility and versatility through the enhancement of existing products and development of new products.

Competition

Given the market opportunity, there are a significant number of competing companies offering gene sequencing equipment or sequencing kits. These include Illumina, Inc., Pacific Biosciences of California, Inc., Thermo Fisher Scientific, Inc., GenapSys, Inc., and Oxford Nanopore Technologies, Ltd. Based on published revenue data, Illumina, Inc. leads the NGS technology market share, followed by Thermo Fisher Scientific, Inc., then Pacific Biosciences of California, Inc. and Oxford Nanopore Technologies, Ltd. We believe we are uniquely positioned among the competition to be the only company offering high strand throughput with the power of single molecule resolution.

Our competitors have greater financial, technical, research and/or other resources than we do. These companies also have larger and more established manufacturing capabilities and marketing, sales and support functions. We expect the competition to intensify within this market. The increased competition may result in pricing pressures, which could harm our sales, profitability or market share. In order for us to successfully compete against these companies, we will need to demonstrate that our products deliver superior performance and value. We will also need to continually improve the breadth and depth of current and future products and applications.

Intellectual Property

Developing and maintaining a strong intellectual property position is an important element of our business. We maintain the intellectual property through a combination of licenses, patent protection and trade secrets.

We have sought, and will continue to seek, patent protection for our technology, for improvements to our technology, as well as for any of our other technologies for which we believe such protection will be advantageous. In 2013, as part of the Helicos bankruptcy proceedings, we entered into the following non-exclusive license agreements:

License Agreement with Helicos Biosciences Corporation. Our tSMS technology has been in development since 2004 at Helicos Biosciences Corporation ("Helicos"), which pioneered the first generation tSMS technology resulting in its commercialization as the HeliScope Genetic Analysis System. In 2013, Daniel Jones, a former scientist at Helicos and our current Chief Executive Officer, formed our company to further the development of tSMS. We then purchased much of our physical assets from Helicos, including, among other items, sequencers, laboratory equipment, internal servers, protocols and data analysis procedures, through Helicos' bankruptcy proceedings that began in 2012.

[Table of Contents](#)

In 2013, we entered into, and since such date fully paid for, a non-exclusive, royalty-free license from Helicos, for the life of such patents, for over 60 patents, all but eight of which have since expired or been abandoned, covering key areas of our technology, including design, methods and chemistry. As part of the Helicos bankruptcy proceedings, Fluidigm Corporation, a U.S. public company engaged in the design, manufacture and sale of biological research equipment based on integrated fluid circuit technology, obtained the rights to this patent portfolio. The license grants to us the right to use or sell throughout the world products or processes based upon the intellectual property covered by the licensed patents in the field of contract gene sequencing, and prohibits us from sublicensing the intellectual property to any third party or to make any assignment of the license. The license may be terminated by Fluidigm in the event we sub-license or assign any of the intellectual to a third party; however, we have the right to use the patented technology in connection with any partnership or collaboration in which we have at least a 50% ownership interest. In addition, Fluidigm has a right to terminate the license in the event Daniel Jones, our Chief Executive Officer, fails to continue to work full time for us or if we fail to use reasonable care in the investigation, testing or solicitation of government approvals with respect to the intellectual property. In addition, the license will automatically terminate in the event we dissolve, cease to conduct business, file a petition for bankruptcy, assign all of our assets to a receiver or trustee or in the event we have an involuntary bankruptcy petition initiated against us that is not dismissed within 60 days. This license is provided to us on an “as is” basis only and without any representations or warranties, express or implied, regarding the intellectual property and the use thereof. In addition, Fluidigm has no obligation under the license agreement to prosecute any patent application or to maintain any rights to the intellectual property by payment of any fees to any governmental agency. While the remaining patents comprising this patent portfolio are expected to expire in 2021 through 2028, as this patent portfolio has been broadly licensed, we do not expect such expirations to have a material adverse effect upon our business operations.

Sub-License Agreement with Helicos Biosciences Corporation. As part of the Helicos bankruptcy proceeding, Arizona Science and Technology Enterprises LLC (“AzTE”) agreed that Helicos could sub-license to us the license agreement between Helicos and AzTE with respect to 10 patents owned by AzTE for the life of such patents. All of the patents under this sublicense have since expired.

We have one pending patent application, which was filed with the United States Patent and Trademark Office in August 2016. Our issued and pending patents cover various aspects of our sequencing technology, and we expect to continue to file new patent applications to protect the improvements to our technologies.

We have registered our corporate name (SeqLL) and design logo, as well as the phrase “tSMS” and “DRS”. We protect trade secrets, know-how, copyrights, and trademarks, as well as continuing technological innovation and licensing opportunities to develop and maintain our competitive position. Our success depends in part on obtaining patent protection for our products and processes, preserving trade secrets, patents, copyrights and trademarks, operating without infringing the proprietary rights of third parties, and acquiring licenses for technology or products.

Employees

As of March 31, 2021, we had eight employees. None of our employees are represented by a collective bargaining agreement, and we have never experienced any work stoppage. We believe we have good relations with our employees.

Properties and Facilities

We lease approximately 11,000 square feet of combined office, laboratory and manufacturing space in Woburn, MA for our headquarters and operations. We also lease bench space and key equipment at a chemistry incubator facility located in Woburn, MA. We anticipate leasing additional space in the Boston, MA area as our needs grow.

Legal Proceedings

From time to time we may be involved in various disputes and litigation matters that arise in the ordinary course of business. We are currently not a party to any material legal proceedings.

Corporation Information

We were incorporated in Delaware on April 3, 2014. Our principal executive offices are located at 317 New Boston Street, Suite 210, Woburn, MA 01801, and our telephone number is (781) 460-6016. Our corporate website address is www.seqll.com. The information contained on or that can be accessed through our website is not incorporated by reference into this prospectus.

MANAGEMENT

Executive Officers and Directors

The following table provides information regarding our key employees and directors:

Name	Age	Position(s)
Executive Officers		
Daniel Jones	41	President, Chief Executive Officer and Chairman
John W. Kennedy	64	Chief Financial Officer and Secretary
Non-Employee Directors		
Patrice M. Milos, Ph.D.	62	Director*
Douglas Miscoll	59	Director
David Pfeffer	62	Director

* Effective as of the closing of this offering.

Executive Officers

Daniel Jones is our Chief Executive Officer and Chairman of the Board. He has been our co-founder, President, and a member of our board of directors since our inception. He has served as Chief Executive Officer since May 2018 and was elected Chairman of the Board in March 2021. Prior to becoming our CEO, he was President from inception to May 2018. Mr. Jones has over 15 years of biotechnology industry experience, including 12 plus years in single molecule sequencing research. Prior to founding our company, Mr. Jones held various positions at Helicos Biosciences, a publicly-traded biotechnology tools company. During his career at Helicos Biosciences, his responsibilities included applications development, instrument prototyping and validation, customer support and bioinformatics analysis, as well as sales and operations. In 2008, Mr. Jones ran the first ever direct RNA sequencing experiments while at Helicos. From December 2003 to March 2007, Mr. Jones worked at U.S. Genomics in the Methods Development group and on development of its Trilogy 2020 Single Molecule Analyzer and Direct miRNA assays. From December 2002 to December 2003, Mr. Jones worked at EXACT Sciences on its ColoGuard assay, a non-invasive, now FDA-approved molecular diagnostic for colorectal cancer. Mr. Jones has authored or co-authored four publications and is named on multiple patents or patent applications. He holds a B.S. degree from Trinity College and has studied biotechnology and bioinformatics at Brandeis University and the University of Massachusetts.

We believe Mr. Jones' experience in the pharmaceutical industry as well as his extensive understanding of our business, operations and strategy qualifies him to serve on our board of directors.

John W. Kennedy has served as our Chief Financial Officer and Secretary since August 2018. From February 2017 to August 2018, Mr. Kennedy served as a business consultant to us. Mr. Kennedy has 34 years of experience in management, consulting and investment banking. From January 1994 to July 2018, Mr. Kennedy managed Kennedy Partners Corp., a boutique merchant banking company where he assisted numerous companies as their investment banker and Chief Financial Officer, raising hundreds of millions of growth capital and completing over a dozen mergers or acquisitions. Mr. Kennedy was also the FINRA Managing Principal for two U.S. broker-dealers of Brazilian banks operating in the U.S., Banco FonteCindam SA and Banco Fibra SA. In prior years Mr. Kennedy worked at The Board of Governors of the Federal Reserve System, Peat, Marwick, Mitchell & Co., The Coca-Cola Company, Morgan Stanley & Co., and D.H. Blair Investment Banking & Co., where he served as Managing Director of Investment Banking conducting private equity investments, private equity placements and IPOs for a wide variety of emerging growth companies. He currently has FINRA Series 82 and 63 licenses. He graduated from Union College with a B.A. in economics and has an M.B.A. in finance and international business management from New York University.

Non-Employee Directors

Patrice M. Milos, Ph.D. will join our board of directors immediately prior to the closing of this offering. Since September 2020, Dr. Milos has been Vice President, Scientific Operations of Pine Trees Health, Inc., a company that is developing a low-cost, rapid diagnostic testing platform for the detection of COVID-19. From October 2016 to September 2020, Dr. Milos was a co-founder, President and Chief Executive Officer of Medley-Genomics Inc., a company focused on using advanced data analytics to support better diagnosis and treatment of complex diseases.

[Table of Contents](#)

From May 2013 to January 2016, Dr. Milos was President and Chief Executive Officer of Claritas Genomics Inc., a subsidiary of Boston Children's Hospital that provided commercial next-generation pediatric molecular diagnostic testing. Dr. Milos is also a member of the board of directors of 54Gene Inc., a U.S. and Nigeria-based startup that collects African genetic code for use in health research and drug development, Slater Technology Fund, a seed-stage venture investor in early-stage technology ventures, and RI Bio, a bioscience, biotech, health and life sciences industry network group dedicated to galvanizing collaboration among industry participants. Dr. Milos has received numerous awards and honors within the life sciences industry and has authored or co-authored over 40 biotech or life sciences publications. She earned a B.A. in biology and chemistry from The College of Saint Rose, a M.S. and Ph.D. in plant molecular genetics and biology from Rensselaer Polytechnic Institute and has completed Post-Doctoral work at Harvard University and Brown University in plant and mouse molecular genetics.

We believe Dr. Milos' management experience and her extensive background and experience in molecular genetics and biology qualifies her to serve on our board of directors.

Douglas Miscoll has served as a member of our board of directors since October 2015. Mr. Miscoll founded Ravello Precision Partners in 2015, which operated as a hedge fund focused on genomic biology companies. Mr. Miscoll founded Ravello Partners LLC in 2010, which manages discretionary portfolios for families and small institutions and is active in the biotechnology sector. From 1999 until 2009, Mr. Miscoll was a Managing Director at Newlight Management, where he was responsible for managing all aspects of two private equity funds and a hedge fund focused on technology, media and communications companies. He originated and directed the firm's public market investment activities. Previously, from 1994 to 1995, he was a Managing Director of Northgate Ventures, a venture capital fund focused on early stage technology companies. Mr. Miscoll was a founding member of the management team that created K-III Communications, a leveraged build-up in the publishing and information services industries sponsored by Kohlberg Kravis Roberts & Co. Mr. Miscoll received an M.B.A. from Georgetown University, a Graduate Certificate from Templeton College, Oxford University, and a B.A. from Santa Clara University.

We believe Mr. Miscoll's executive management experience qualifies him to serve on our board of directors.

David Pfeffer has served as a member of our board of directors since September 2018 and is currently our Audit Committee Chairman. Mr. Pfeffer has over 30 years of experience in diverse roles in financial services; leading companies, developing and executing strategy, building businesses up from the ground floor and driving innovation to grow in today's ultra-competitive and dynamic global economy. Mr. Pfeffer is currently CEO of Brick Citi Capital, LLC, an investment services and business advisory firm founded in 2019. Previously, he was Executive Vice President and Chief Financial Officer of Oppenheimer Funds, a global asset manager, from 2004 to 2019. He was a Management Director on the Oppenheimer Funds, Inc. board and President of Oppenheimer Funds Harbourview Asset Management. From 2009 to 2019, Mr. Pfeffer served as an Independent Director at ICI Mutual Insurance Co., including a role as Audit Committee Chairman. From 2000 to 2004, Mr. Pfeffer worked as Institutional Chief Financial Officer and Director at Citigroup Asset Management. Mr. Pfeffer was at J.P. Morgan from 1984 to 2000, where he gained significant international experience serving as Chief Financial Officer and Director of JPM Brazil for five years in São Paulo and supported JPM's international businesses during his 16 year tenure there. Mr. Pfeffer worked as a public accountant at Ernst & Whinney from 1981 to 1984.

Mr. Pfeffer is a Certified Public Accountant, a Chartered Global Management Accountant and has his FINRA Series 99 Operations Professional license. He graduated Cum Laude from the University of Delaware with a B.S. in Accounting.

We believe Mr. Pfeffer's experience in corporate governance and capital markets qualifies him to serve on our board of directors.

Family Relationships

There are no family relationships between or among any of our directors or executive officers. There are no family relationships among our officers and directors and those of our subsidiaries and affiliated companies.

Board Composition and Classified Board Structure

Our business and affairs are organized under the direction of our board of directors, which at the closing of this offering will consist of four members. Upon the closing of this offering, our board of directors will be divided into three classes: Class I (Dr. Patrice Milos and David Pfeffer), Class II (Douglas Miscoll) and Class III (Daniel Jones). The term of office of the initial Class I directors will expire at the first annual meeting of the stockholders following the closing of this offering, the term of office of the initial Class II directors will expire at the second annual meeting of the stockholders following the closing of this offering, and the term of office of the initial Class III directors will expire at the third annual meeting of the stockholders following the closing of this offering. At each annual meeting of stockholders, commencing with the first annual meeting of stockholders following the closing of this offering, each of the successors elected to replace the directors of a class whose term shall have expired at such annual meeting shall be elected to hold office for a three-year term and until the third annual meeting next succeeding his or her election and until his or her respective successor shall have been duly elected and qualified or until his or her death, resignation, or removal.

The primary responsibilities of our board of directors are to provide oversight, strategic guidance, counseling and direction to our management. Our board of directors meets on a regular basis. Upon completion of this offering, our bylaws will be amended and restated to provide that the authorized number of directors may be changed only by resolution of the board of directors. We have no formal policy regarding board diversity. Our priority in selection of board members is identification of members who will further the interests of our stockholders through his or her established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business and understanding of the competitive landscape.

Director Independence

The Nasdaq Marketplace Rules require a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, the Nasdaq Marketplace Rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act.

Under Rule 5605(a)(2) of the Nasdaq Marketplace Rules, a director will only qualify as an "independent director" if, in the opinion of our board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3 of the Exchange Act, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise be an affiliated person of the listed company or any of its subsidiaries.

Our board of directors has reviewed the composition of our board of directors and its committees and the independence of each director. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors has determined that each of Doug Miscoll and David Pfeffer is, and Dr. Patrice Milos will be, an "independent director" as defined under Rule 5605(a)(2) of the Nasdaq Marketplace Rules. Our board of directors also determined that the directors who will each serve on our audit committee, our compensation committee, and our nominating and corporate governance committee following this offering, satisfy the independence standards for such committees established by the SEC and the Nasdaq Marketplace Rules, as applicable. In making such determinations, our board of directors considered the relationships that each such non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining independence, including the beneficial ownership of our capital stock by each non-employee director.

Board Committees

Our board of directors will establish three standing committees — audit, compensation, and nominating and corporate governance — each of which will operate under a charter approved by our board of directors. Prior to the completion of this offering, copies of each committee's charter will be posted on the Investor Relations section of our website, which is located at www.seqll.com. Each committee will have the composition and responsibilities described below. Our board of directors may from time to time establish other committees.

Audit Committee

Our audit committee consists of David Pfeffer, who is the chair of the committee, and Douglas Miscoll, and will include Dr. Patrice Milos when she joins our Board. Our board of directors has determined that each of the members of our audit committee satisfies the Nasdaq Marketplace Rules and SEC independence requirements. The functions of this committee include, among other things:

- evaluating the performance, independence and qualifications of our independent auditors and determining whether to retain our existing independent auditors or engage new independent auditors;
- reviewing and approving the engagement of our independent auditors to perform audit services and any permissible non-audit services;
- reviewing our annual and quarterly financial statements and reports, including the disclosures contained under the caption “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and discussing the statements and reports with our independent auditors and management;
- reviewing with our independent auditors and management significant issues that arise regarding accounting principles and financial statement presentation and matters concerning the scope, adequacy and effectiveness of our financial controls;
- reviewing our major financial risk exposures, including the guidelines and policies to govern the process by which risk assessment and risk management is implemented; and
- reviewing and evaluating on an annual basis the performance of the audit committee, including compliance of the audit committee with its charter.

Our board of directors has determined that David Pfeffer qualifies as an “audit committee financial expert” within the meaning of applicable SEC regulations and meets the financial sophistication requirements of the Nasdaq Marketplace Rules. In making this determination, our board of directors has considered Mr. Pfeffer’s extensive financial experience and business background. Both our independent registered public accounting firm and management periodically will meet privately with our audit committee.

Compensation Committee

Our compensation committee will consist of Doug Miscoll, who will chair the committee, and David Pfeffer, and will include Dr. Patrice Milos when she joins our Board. Our Board has determined that each of the members of our compensation committee satisfies the Nasdaq Marketplace Rules independence requirements. The functions of this committee include, among other things:

- reviewing, modifying and approving (or if it deems appropriate, making recommendations to the full board of directors regarding) our overall compensation strategy and policies;
- reviewing and approving the compensation, the performance goals and objectives relevant to the compensation, and other terms of employment of our executive officers;
- reviewing and approving (or if it deems appropriate, making recommendations to the full board of directors regarding) the equity incentive plans, compensation plans and similar programs advisable for us, as well as modifying, amending or terminating existing plans and programs;
- reviewing and approving the terms of any employment agreements, severance arrangements, change in control protections and any other compensatory arrangements for our executive officers;
- reviewing with management and approving our disclosures under the caption “Compensation Discussion and Analysis” in our periodic reports or proxy statements to be filed with the SEC; and
- preparing the report that the SEC requires in our annual proxy statement.

None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee of another entity that had one or more of its executive officers serving as a member of our board of directors or compensation committee. None of the members of our compensation committee, when appointed, will have been at any time one of our officers or employees.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee will consist of Douglas Miscoll, who will be the chair of the committee, and Dr. Patrice Milos and David Pfeffer. Our board of directors has determined that each of the members of this committee satisfies the Nasdaq Marketplace Rules independence requirements. The functions of this committee include, among other things:

- identifying, reviewing and evaluating candidates to serve on our board of directors consistent with criteria approved by our board of directors;
- evaluating director performance on our board of directors and applicable committees of our board of directors and determining whether continued service on our board of directors is appropriate;
- evaluating, nominating and recommending individuals for membership on our board of directors; and
- evaluating nominations by stockholders of candidates for election to our board of directors.

Scientific Advisors

Our executive team is supported by our Scientific Advisors. The Scientific Advisors provide scientific advice regarding our tSMS technology to our executive team. Each our Scientific Advisors was selected based on experience with our tSMS technology and familiarity with our tSMS sequencers. The Scientific Advisors are not required to provide any particular services to us and are not currently compensated.

Tim McCaffrey, Ph.D. — Professor of Medicine and Director, Division of Genomic Medicine, George Washington University. Throughout his career, Dr. McCaffrey has been involved in research focused in three major areas: cardiovascular disease, genomics and stem cells. In 2001, he received a prestigious MERIT award from NIH for his work on vascular aging. Dr. McCaffrey received his B.A. from St. Mary's University and his Masters and Doctorate from Purdue University. He received post-doctoral training at Cornell University Medical College in New York City. Dr. McCaffrey is a close collaborator of ours and has used the tSMS platform to identify several panels of RNA transcripts that are highly predictive biomarkers in the fields of cardiovascular disease, infection and inflammation. He co-founded True Bearing Diagnostics to commercialize diagnostics based on those discoveries.

Efrat Shema, Ph.D. — Principal Investigator and Assistant Professor at the Weizmann Institute of Science. Dr. Shema completed her M.Sc. and Ph.D. at the Weizmann Institute in 2007 and 2012 in molecular cell biology, after earning her B.Sc. in life sciences at the Hebrew University in Jerusalem in 2005. She moved to Boston in 2012 as a Fulbright Scholar, conducting post-doctoral work under Dr. Bradley Bernstein at Massachusetts General Hospital, Harvard Medical School, and the Broad Institute of MIT and Harvard. During her Ph.D. studies at the Weizmann Institute, Dr. Shema received a prestigious Adams Fellowship from the Israel Academy of Sciences and Humanities, as well as the Otto Schwartz Prize for Excellence and a UNESCO-L'OREAL national award for young women in life sciences. Dr. Shema collaborates with us to study epigenetic events that contribute to cellular differentiation, early development and cancer using innovative single-molecule technologies.

Claes Wahlestedt, M.D., Ph.D. — Director, Center for Therapeutic Innovation, Leonard M. Miller Professor and Associate Dean for therapeutic innovation at the University of Miami. From 2005 to 2011, he was a professor and director of neuroscience at The Scripps Research Institute. The author of over 300 papers in scientific journals, with over 43,000 citations, Dr. Wahlestedt has a long-standing interest in genomics and epigenetics and has pioneered various translational efforts in these fields. At Scripps in 2008, he co-founded CuRNA (now part of Opko Health), a spin-off company based on his patent for targeting regulatory noncoding RNAs to up-regulate therapeutic proteins. In 2011, he co-founded Epigenetix Inc., a University of Miami spin-off focusing on small molecule drugs for a variety of drug targets in cancer and neuroscience. Dr. Wahlestedt advises us on applications development and scientific strategy.

Philip Kapranov, Ph.D. — Professor and Director, Institute of Genomics at HuaQiao University, Xiamen, China. Dr. Kapranov's primary research interest includes systems biology and genomics in the context of gene expression and discovery of new RNA species (both protein-coding and non-coding) and their functions, especially in the context of human disease particularly cancer. Dr. Kapranov received his B.Sc. in microbial biotechnology, from Kiev Institute of Food Industry, Ukraine, and his Ph.D. in genetics from Michigan State University. Previously, he was a Senior Scientist at Affymetrix where his research first demonstrated an order of magnitude increase in

transcriptional activity on human chromosomes 21 and 22 over that accounted for by previously characterized and predicted exons. Dr. Kapranov is a long-time collaborator of ours who purchased and deployed the first HeliScope in China, which his lab uses for researching non-coding RNA and basic science.

Code of Business Conduct and Ethics

Prior to the closing of this offering, our board of directors will adopt a written code of conduct that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. We intend to post on our website a current copy of the code and all disclosures that are required by law or Nasdaq Marketplace Rules concerning any amendments to, or waivers from, any provision of the code.

Board Leadership Structure

Our board of directors is free to select the Chairman of the board of directors and a Chief Executive Officer in a manner that it considers to be in the best interests of our company at the time of selection. Currently, Daniel Jones serves as our Chief Executive Officer and Chairman of the board of directors. We currently believe that this leadership structure is in our best interests. As Chairman of the Board, Mr. Jones' key responsibilities will include facilitating communication between our board of directors and management, assessing management's performance, managing board members, preparation of the agenda for each board meeting, acting as chair of board meetings and meetings of our company's stockholders and managing relations with stockholders, other stakeholders and the public.

We will take steps to ensure that adequate structures and processes are in place to permit our board of directors to function independently of management. The directors will be able to request at any time a meeting restricted to independent directors for the purposes of discussing matters independently of management and are encouraged to do so should they feel that such a meeting is required.

Our board of directors, as a whole and also at the committee level, plays an active role overseeing the overall management of our risks. Our Audit Committee reviews risks related to financial and operational items with our management and our independent registered public accounting firm. Our board of directors is in regular contact with our Chief Executive Officer and Chief Financial Officer, who report directly to our board of directors and who supervise day-to-day risk management.

Role of Board in Risk Oversight Process

We face a number of risks, including those described under the caption "Risk Factors" contained elsewhere in this prospectus. Our board of directors believes that risk management is an important part of establishing, updating and executing on our business strategy. Our board of directors has oversight responsibility relating to risks that could affect our corporate strategy, business objectives, compliance, operations, and the financial condition and performance. Our board of directors focuses its oversight on the most significant risks facing us and, on our processes, to identify, prioritize, assess, manage and mitigate those risks. Our board of directors receives regular reports from members of our senior management on areas of material risk to us, including strategic, operational, financial, legal and regulatory risks. While our board of directors has an oversight role, management is principally tasked with direct responsibility for management and assessment of risks and the implementation of processes and controls to mitigate their effects on us.

EXECUTIVE COMPENSATION

The following table sets forth total compensation paid to our named executive officers for the years ended December 31, 2020 and 2019. Individuals we refer to as our “named executive officers” include our Chief Executive Officers and our Chief Financial Officer whose salary and bonus for services rendered in all capacities exceeded \$100,000 during the fiscal year ended December 31, 2020. Currently, we do not have employment agreements with any of our executive officers, although we may enter into employment agreements with our officers in the future.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Option Awards (\$) ⁽⁴⁾	Non-Equity Incentive Plan Compensation (\$)	Nonqualified Deferred Compensation Earnings (\$)	All Other Compensation (\$)	Total (\$)
Daniel Jones	2020	\$ 53,846	—	—	—	—	—	\$ 53,846
Chief Executive Officer	2019	134,616	—	—	—	—	—	134,616
John W. Kennedy	2020	49,440	—	—	—	—	—	49,440
Chief Financial Officer	2019	102,000	—	—	—	—	—	102,000

SeqLL Inc. 2014 Equity Incentive Plan

Our board of directors and our stockholders originally approved our 2014 Equity Incentive Plan, or the 2014 Plan, in April 2014. Our 2014 Plan allows for the grant of equity-based awards to our and our affiliates’ officers, employees, directors and key persons. On March 18, 2021, our board of directors and stockholders approved an amendment and restatement of our 2014 Plan to increase the number of shares of common stock available for equity awards under the 2014 plan to 3.5 million shares. The description below is of our 2014 Plan as amended and restated, except as otherwise noted.

Purpose. The purpose of our 2014 Plan, as amended and restated, is to encourage and enable our and our affiliates’ officers, employees, directors and other key persons (including consultants and prospective employees) upon whose judgment, initiative and efforts we largely depend for the successful conduct of our business to acquire a proprietary interest in our company.

Eligibility. Participants in our 2014 Plan may include full or part-time officers, employees, directors and key persons (including advisors and consultants) of our company or our affiliates who are selected to receive awards from time to time by the administrator in its sole discretion.

Administration. Our 2014 Plan is administered by our compensation committee, or, if at any time our compensation committee is not in existence, our board of directors. In addition, to the extent applicable law permits, our board of directors may delegate any of its authority under our 2014 Plan to another committee or one or more officers, and our compensation committee may delegate any of its authority hereunder to a sub-committee or to one or more officers, except that no such delegation is permitted with respect to awards made to individuals who are subject to Section 16 of the Exchange Act unless the delegation is to another committee consisting entirely of “nonemployee directors” within the meaning of Rule 16b-3 of the Exchange Act. Subject to the provisions of our 2014 Plan, the administrator has the power to administer the plan, including but not limited to, the power to select the eligible officers, employees, directors, and key employees to whom awards are granted; to determine the number of shares to be covered by each award; to determine the terms and conditions of any award and to amend any outstanding award.

Authorized Shares. As of March 31, 2021, a total of 3,500,000 shares of our common stock were authorized for issuance under our 2014 Plan, as amended and restated, effective on which the common shares of the Company are first sold to the public pursuant to an effective registration statement filed by the Company under the Act. All of the authorized shares may be issued pursuant to incentive stock options. The shares available for issuance may be authorized but unissued shares or shares reacquired by us and held in its treasury. The share reserve under our 2014 Plan is depleted by the maximum number of shares, if any, that may be issuable under an award as determined at the time of grant. However, awards that may only be settled in cash (determined at the time of grant) do not deplete the share reserve.

If (1) an award lapses, expires, terminates or is cancelled without the issuance of shares, (2) it is determined during or at the conclusion of the term of an award that all or some portion of the shares with respect to which the award was granted will not be issuable on the basis that the conditions for such issuance will not be satisfied, (3) shares are forfeited under an award, (4) shares are issued under any award and we subsequently reacquire them pursuant to rights reserved upon the issuance, (5) an award or a portion thereof is settled in cash, or shares are withheld by us in payment of the exercise price or withholding taxes of an award, then such shares will be recredited to the reserve and may again be used for new awards. However, shares recredited to reserve pursuant to clause (4) in the preceding sentence may not be issued pursuant to incentive stock options.

Adjustments to Shares. If, as a result of any reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in our capital stock, the outstanding shares are increased or decreased or are exchanged for a different number or kind of shares or other securities of our company, or additional shares or new or different shares or other securities of our company or other non-cash assets are distributed with respect to such shares or other securities, or, if, as a result of any merger, consolidation or sale of all or substantially all of our assets, the outstanding shares are converted into or exchanged for a different number or kind of securities of our company or any successor entity (or a parent or subsidiary thereof), the administrator will make an appropriate or proportionate adjustment in (1) the maximum number of shares reserved for issuance under our 2014 Plan; (2) the number and kind of shares or other securities subject to any then outstanding awards under our 2014 Plan; and (3) the exercise price for each share subject to any then outstanding stock options. The administrator also may adjust the number of shares subject to outstanding awards and the exercise price and the terms of outstanding awards to take into consideration material changes in accounting practices or principles, extraordinary dividends, acquisitions or dispositions of stock or property or any other event if it is determined by the administrator that such adjustment is appropriate to avoid distortion in the operation of our 2014 Plan, subject to the limitations described in our 2014 Plan.

Effect of a Sale Event. Unless otherwise provided in an award or other agreement, upon a “sale event,” if the successor or surviving corporation (or parent thereof) so agrees, then, without the consent of any holder of an award (or other person with rights in an award), some or all outstanding awards may be assumed, or replaced with the same type of award with similar terms and conditions, subject to adjustments described in our 2014 Plan, by the successor or surviving corporation (or parent thereof) in the sale event. A “sale event” is generally defined for this purpose as (1) any person becoming the beneficial owner of 50% or more of the combined voting power of our then-outstanding securities (subject to exceptions and other limitations scribed in our 2014 Plan), (2) our stockholders approving a plan of complete liquidation or dissolution of our company, (3) the consummation of (a) an agreement for the sale or disposition of all or substantially all of our assets (other than to certain excluded persons), (b) a merger, consolidation or reorganization of our company with or involving any other corporation (subject to specified exceptions), or (4) a change in the majority of our board of directors that is not approved by a supermajority of the existing board. More detailed descriptions and additional information on limitations relating to each of these sale events is are in our 2014 Plan.

If, after a sale event in which the awards are assumed or replaced, the award holder experiences a termination event as a result of a termination of service without cause, due to death or disability, or as a result of a resignation for good reason, in each case within 24 months after a sale event, then the award holder’s awards will be vested in full or deemed earned in full (assuming target performance, if applicable).

To the extent the awards are not assumed or replaced in the sale event, then, (1) each option will become immediately and fully vested and, unless the administrator determines otherwise, will be canceled on the sale event in exchange for a cash payment equal to the excess of the price paid in the sale event over the exercise price of the option, and all options with an exercise price lower than the price paid in the sale event will be canceled for no consideration, (2) restricted stock and restricted stock units (not subject to performance goals) will be vested in full and settled, along with any accompanying dividend equivalent units, and (3) all awards subject to performance goals with outstanding performance periods will be canceled in exchange for a cash payment equal to the amount that would have been due under the award if performance had been satisfied at the better of target or the performance trend through the sale event.

Solely with respect to awards granted on and after the completion of this offering, and except as otherwise expressly provided in any agreement with an award holder, if the receipt of any payment by an award holder under the circumstances described above would result in the payment by the award holder of any excise tax provided for in Section 280G and Section 4999 of the Code, then the amount of such payment shall be reduced to the extent required to prevent the imposition of such excise tax.

Limit on Director Awards. The maximum value of awards granted during a single fiscal year to any non-employee director, taken together with any cash fees paid during the fiscal year to the non-employee director in respect of the director's service as a member of our board of directors during such year (including service as a member or chair of any committees of the board), shall not exceed \$800,000 in total value for the first year of service and \$400,000 for future years of service (calculating the value of any such awards based on the grant date fair value of such awards for financial reporting purposes).

Types of Awards. Awards under our 2014 Plan may consist of incentive stock options, non-qualified stock options, restricted stock awards, unrestricted stock awards, restricted stock units, or any combination of those awards. Some provisions of our 2014 Plan relating to these award types are summarized below.

Stock Options. A stock option is an award entitling the recipient to acquire shares, at such exercise price as determined by the administrator (which may not be lower than the fair market value of the underlying shares on the date of grant) and subject to such restrictions and conditions as the administrator may determine at the time of grant. Conditions may be based on continuing employment (or other service relationship) and/or achievement of pre-established performance goals and objectives. Stock options granted under our 2014 Plan may be either non-qualified stock options or incentive stock options. Incentive stock options may be granted only to our employees or employees of our subsidiaries, and must certain requirements specified in our 2014 Plan and the Code. Stock options will become exercisable at such time or times as determined by the administrator at or after the grant date and set forth in the stock option agreement. The administrator may at any time accelerate the exercisability of all or any portion of any stock option.

Restricted Stock. A restricted stock award is a grant (or sale, at such purchase price as determined by the administrator) of shares that are subject to such restrictions and conditions as the administrator may determine at the time of grant. Conditions may be based on continuing employment (or other service relationship) or achievement of pre-established performance goals and objectives. The terms and conditions of each such agreement shall be determined by the administrator.

Unrestricted Stock. The administrator may grant (or sell at par value or such higher purchase price determined by the administrator) unrestricted shares, in respect of past services, in exchange for cancellation of a compensation right, as a bonus, or any other valid consideration, or in lieu of any cash compensation due to such individual.

Restricted Stock Units and Dividend Equivalent Units. The administrator may grant restricted stock units representing the right to receive a future payment of cash, the amount of which is determined by reference to our shares, shares or a combination of cash and shares. The administrator will determine all terms and conditions of an award of restricted stock units, including but not limited to the number granted, in what form they will be settled, whether performance goals must be achieved for the restricted stock units to be earned, the length of any vesting or performance period and the date of payment, and whether the grant will include dividend equivalent units. The administrator will determine all terms and conditions of an award of dividend equivalent units, including whether payment will be made in cash or shares. However, no dividend equivalent units may be paid with respect to restricted stock units that are not earned or that do not become vested.

Termination of Employment or Service. Except as otherwise provided in any award agreement or an award holder's employment offer letter, severance letter or services agreement, or as determined by administrator at the time of the award holder's termination of employment or service:

- If the termination is for cause, the award holder will forfeit all outstanding awards immediately upon termination and will not be permitted to exercise any stock options following termination.

- If the termination is due to the award holder's death or disability (when the award holder could not have been terminated for cause), the award holder will forfeit the unvested portion of any award, and any vested stock options will remain exercisable until the earlier of the original stock option expiration date or 12 months from the date of termination.
- If the termination was for any reason other than cause, death or disability (when the award holder could not have been terminated for cause), the award holder will forfeit the unvested portion of any award, and any vested stock options will remain exercisable until the earlier of the original stock option expiration date or three months from the date of termination.

Term of Plan and Plan Amendments. Our 2014 Plan, as amended and restated, will become effective upon the completion of this offering. Our 2014 Plan will continue until all shares reserved for issuance under our 2014 Plan have been issued, or, if earlier, until such time as the administrator terminates our 2014 Plan as described below. No incentive stock options may be granted after the ten (10) year anniversary of the date of stockholder approval of the amendment and restatement of our 2014 Plan unless the stockholders have approved an extension.

Our board of directors may, at any time, amend, terminate or discontinue our 2014 Plan, except that our stockholders must approve any amendment to the extent approval is required by Section 16 of the Exchange Act, the Code, the listing requirements of any principal securities exchange or market on which our shares are then traded or any other applicable law. In addition, stockholders must approve any amendment to our 2014 Plan that would materially increase the number of shares reserved (except as permitted by the adjustment provisions of our 2014 Plan) or that would diminish the protections afforded by the anti-repricing provisions of our 2014 Plan.

Any termination of our 2014 Plan will not affect the authority of our board of directors and the administrator to administer outstanding awards or affect the rights of award holders with respect to awards previously granted to them.

Award Amendments, Cancellation and Disgorgement. Subject to the anti-repricing and other requirements of our 2014 Plan, the administrator may modify, amend or cancel any award. However, except as otherwise provided in our 2014 Plan or an award agreement, the consent of the award holder is required to any amendment that materially diminishes the holder's rights under the award. Our 2014 Plan includes exceptions to the consent requirement for actions necessary to comply with applicable law or the listing requirements of securities exchanges, to preserve favorable accounting or tax treatment of any award for our company or to the extent the administrator determines that an action does not materially and adversely affect the value of the award or is in the best interest of the affected award holder or any other person who has an interest in the award.

The administrator has full power and authority to terminate or cause an award holder to forfeit an award, and require an award holder to disgorge to us, any gains attributable to the award, if the award holder engages in any action constituting, as determined by the administrator in its discretion, cause for termination, or a breach of any award agreement or any other agreement between the award holder and us or one of our affiliates concerning noncompetition, non-solicitation, confidentiality, trade secrets, intellectual property, non-disparagement or similar obligations. In addition, any awards granted pursuant to our 2014 Plan, and any shares issued or cash paid pursuant to an award, will be subject to any recoupment or claw-back policy that is adopted by us from time to time, or any recoupment or similar requirement otherwise made applicable to us by law, regulation or listing standards.

Repricing and Backdating Prohibited. Notwithstanding anything in our 2014 Plan to the contrary, and except for the adjustments provided for in our 2014 Plan, neither the administrator nor any other person may (1) amend the terms of outstanding stock options to reduce the exercise or grant price of such outstanding stock options; (2) cancel outstanding stock options in exchange for stock options with an exercise or grant price that is less than the exercise or grant price of the original stock options; or (3) cancel outstanding stock options with an exercise or grant price above the current fair market value of a share in exchange for cash or other securities. In addition, the administrator may not make a grant of a stock option with a grant date that is effective prior to the date the administrator takes action to approve the award.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth outstanding equity awards to our named executive officers as of December 31, 2020.

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Option Awards			Stock Awards	
		Number of Securities Underlying Unexercised Options (#) Unexercisable ⁽¹⁾	Option Exercise Price	Option Expiration Date	Number of Shares or Units of Stock that have not Vested	Market Value of Shares or Units of Stock that have not Vested
Daniel Jones	97,297	81,081	\$ 2.46	9/5/2028	—	\$ —
John W. Kennedy	67,568	67,268	2.46	9/5/2028	—	—

(1) All of these options vest by their terms. All unvested options will vest immediately upon the consummation of this offering.

Director Compensation

General. The following discussion describes the significant elements of the expected compensation program for members of our board of directors and its committees. The compensation of our directors is designed to attract and retain committed and qualified directors and to align their compensation with the long-term interests of our shareholders. Directors who are also executive officers (each, an “Excluded Director”) will not be entitled to receive any compensation for his or her service as a director, committee member or Chair of our board of directors or of any committee of our board of directors.

Director Compensation Arrangements. Our non-employee director compensation program is designed to attract and retain qualified individuals to serve on our board of directors. Our board of directors, on the recommendation of our compensation committee, will be responsible for reviewing and approving any changes to the directors’ compensation arrangements. In consideration for serving on our board of directors, each director (other than Excluded Directors) will be paid an annual retainer. All directors will be reimbursed for their reasonable out-of-pocket expenses incurred while serving as directors.

Our board of directors has approved the following compensation program for the non-employee members of our board of directors.

Cash Compensation. Under such program, we will pay each non-employee director a cash fee, payable quarterly, of \$1,000 per month for service on our board of directors.

Equity Awards. Each non-employee director will receive a one-time initial stock option award for 16,216 shares of our common stock, which options shall vest in arrears in two equal tranches on the first and second anniversaries of service on our Board. Each non-employee director shall also be eligible to receive grants of stock options, each in an amount designated by the Compensation Committee of our board of directors, from any equity compensation plan approved by the Compensation Committee of our Board.

In addition to such compensation, we will reimburse each non-employee director for all pre-approved expenses within 30 days of receiving satisfactory written documentation setting out the expense actually incurred by such director. These include reasonable transportation and lodging costs incurred for attendance at any meeting of our board of directors.

[Table of Contents](#)

The following table sets forth the director compensation we accrued in the year ended December 31, 2020 (excluding compensation to our executive officers set forth in the summary compensation table above). All of such compensation remains unpaid.

Name	Fees Earned or Paid in Cash	Stock Awards	Total (\$)
Douglas Miscoll	\$ 12,000	\$ —	\$ 12,000
David Pfeffer	12,000	—	12,000
William C. St. Laurent ⁽¹⁾	12,000	—	12,000
Total:	<u>\$ 36,000</u>	<u>\$ —</u>	<u>\$ 36,000</u>

(1) Mr. St. Laurent resigned from our board of directors on March 18, 2021.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information regarding the beneficial ownership of our common stock as of March 31, 2021 by:

- each person known by us to be a beneficial owner of more than 5% of our outstanding common stock;
- each of our directors;
- each of our named executive officers; and
- all directors and executive officers as a group.

The amounts and percentages of common stock beneficially owned are reported on the basis of regulations of the SEC governing the determination of beneficial ownership of securities. Under the rules of the SEC, a person is deemed to be a “beneficial owner” of a security if that person has or shares “voting power,” which includes the power to vote or to direct the voting of such security, or “investment power,” which includes the power to dispose of or to direct the disposition of such security. A person is also deemed to be a beneficial owner of any securities of which that person has a right to acquire beneficial ownership within 60 days after March 31, 2021. Under these rules, more than one person may be deemed a beneficial owner of the same securities and a person may be deemed a beneficial owner of securities as to which he has no economic interest. Except as indicated by footnote, to our knowledge, the persons named in the table below have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them.

Applicable percentage ownership prior to this offering is based on 4,864,862 shares of common stock outstanding as of March 31, 2021. The percentage of beneficial ownership after this offering (i) assumes the sale and issuance of 2,315,789 shares of common stock in this offering (based upon the assumed sale of 2,315,789 Units in this offering at an assumed initial public offering price of \$4.75 per Unit, which is the midpoint of the price range set forth on the cover page of this prospectus) and no exercise by the underwriters of their option to purchase additional shares of common stock, and (ii) reflects the issuance of 3,130,622 shares of common stock upon the conversion of all of our outstanding shares of preferred stock and 641,895 shares of common stock upon the conversion of \$2,141,730 principal amount of outstanding indebtedness, in each case prior to the closing of this offering.

The following table does not reflect (i) any Units that may be purchased in this offering pursuant to our directed share program described under “Underwriting” or (ii) any Units that may be purchased in this offering by certain of our existing securityholders and their affiliated entities, who have indicated an interest in purchasing up to an aggregate of approximately \$1.5 million worth of Units in this offering at the initial public offering price.

Unless otherwise noted below, the address of the persons listed on the table is *c/o* SeqLL Inc., 317 New Boston Street, Suite 210, Woburn, Massachusetts 01801.

Name and Address of Beneficial Owner	Beneficial Ownership Prior to Offering		Beneficial Ownership After the Offering	
	Number of Shares	Percentage	Number of Shares	Percentage
Executive Officers and Directors				
Daniel Jones ⁽¹⁾	2,455,945	49.6%	2,545,134	22.2%
John W. Kennedy ⁽²⁾	67,567	1.4	135,135	*
Dr. Patrice M. Milos ⁽³⁾	—	—	—	—
Douglas Miscoll ⁽⁴⁾	58,445	1.2	58,445	*
David Pfeffer ⁽⁵⁾	16,216	*	16,216	*
All directors and executive officers as a group (4 persons)				
	2,598,173	51.9	2,754,928	24.6
5% Stockholders				
William C. St. Laurent ⁽⁶⁾	4,027,049	49.4	4,027,049	28.3
St. Laurent Investments, LLC ⁽⁷⁾	2,095,034	30.1	2,095,034	20.9
Wendy St. Laurent ⁽⁸⁾	744,243	15.3	744,243	6.8
Lucas Campbell ⁽⁹⁾	602,568	12.4	602,568	5.5
William Campbell ⁽¹⁰⁾	602,568	12.4	602,568	5.5
Georges C. St. Laurent III Descendants' Trust ⁽¹¹⁾	583,172	10.7	583,172	5.1
William C. St. Laurent Descendants' Trust ⁽¹²⁾	583,172	10.7	583,172	5.1
Georges C. St. Laurent Jr. ⁽¹³⁾	475,629	8.9	475,629	4.2

* Represents beneficial ownership of less than 1%.

- (1) Includes (i) 2,366,756 shares of common stock and (ii) 178,378 shares of common stock issuable upon the exercise of outstanding stock options, of which options to purchase 97,297 shares are currently exercisable and 81,081 will vest upon the closing of this offering.
- (2) Represents shares of common stock issuable upon the exercise of stock options, of which options to purchase 67,567 shares are currently exercisable and options to purchase 67,568 shares will vest upon the closing of this offering.
- (3) Dr. Milos will join our board of directors prior to the closing of this offering.
- (4) Includes 16,216 shares of common stock issuable upon the exercise of currently exercisable stock options.
- (5) Includes 16,216 shares of common stock issuable upon the exercise of currently exercisable stock options.
- (6) Includes (i) 16,216 shares of common stock issuable upon the exercise of currently exercisable stock options, (ii) 5,212 shares of common stock issuable upon the exercise of outstanding stock purchase warrants, (iii) 744,243 shares of common stock held by Mr. St. Laurent's spouse, (iv) 2,095,034 shares of common stock beneficially owned by St. Laurent Investments LLC, (v) 583,172 shares of common stock beneficially owned by the Georges C. St. Laurent III Descendants' Trust and (vi) 583,172 shares of common stock beneficially owned by the William C. St. Laurent Descendants' Trust. The address of Mr. St. Laurent is 120 NE 136 Avenue, Vancouver, WA 98684.
- (7) Includes (i) 1,008,687 shares of common stock issuable upon the conversion of outstanding shares of Series A preferred stock, (ii) 564,451 shares of common stock issuable upon the exercise of currently exercisable warrants and (iii) 521,896 shares of common stock issuable upon the conversion of \$1,691,730 aggregate principal amount of promissory notes that will be converted to common stock at the consummation of this offering. William C. St. Laurent is the managing member of St. Laurent Investments, LLC and, as a result, may be deemed to have voting and investment power with respect to the shares held by St. Laurent Investments, LLC. The address of St. Laurent Investments, LLC is 120 NE 136 Avenue, Vancouver, WA 98684.
- (8) Includes (i) 594,122 shares of common stock and (ii) 8,446 shares of common stock issuable upon the conversion of outstanding shares of Series A preferred stock. The address of Wendy St. Laurent is 375 Commerce Way, Suite 101, Longwood, FL 32750.
- (9) Includes (i) 594,122 shares of common stock and (ii) 8,446 shares of common stock issuable upon the conversion of outstanding shares of Series A preferred stock. The address of Lucas Campbell is 373 NE 25th Place, Apt. 101, Homestead, FL 33033.
- (10) The address of William Campbell is Ulriksborgsgatan 7, Apt.2603, Stockholm, Sweden, 112 18.
- (11) Represents shares of common stock issuable upon the conversion of outstanding shares of Series A preferred stock. William C. St. Laurent is the trustee of the Georges C. St. Laurent III Descendants' Trust and, as a result, may be deemed to have voting and investment power with respect to the shares held by the Georges C. St. Laurent III Descendants' Trust. The address of the Georges C. St. Laurent III Descendants' Trust is 120 NE 136 Avenue, Vancouver, WA 98684.

[Table of Contents](#)

- (12) Represents shares of common stock issuable upon the conversion of outstanding shares of Series A preferred stock. William C. St. Laurent is the trustee of the William C. St. Laurent III Descendants' Trust and, as a result, may be deemed to have voting and investment power with respect to the shares held by the Williams C. St. Laurent III Descendants' Trust. The address of the William C. St. Laurent III Descendants' Trust is 120 NE 136 Avenue, Vancouver, WA 98684.
- (13) Includes (i) 422,297 shares of common stock issuable upon the conversion of shares of Series A preferred stock owned by Georges C. St. Laurent Jr. and (ii) 26,666 shares of common stock issuable upon the conversion of \$100,000 principal amount of promissory notes that will be converted to common stock at the consummation of this offering and 26,666 shares of common stock issuable up the exercise of currently exercisable warrants, each owned by The Georges C. St. Laurent Jr. Trust, of which Georges C. St. Laurent Jr. is the trustee. The address of Georges C. St. Laurent Jr. is 120 NE 136 Avenue, Vancouver, WA 98684.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Procedures for Approval of Related Party Transactions

A “related party transaction” is any actual or proposed transaction, arrangement or relationship or series of similar transactions, arrangements or relationships, including those involving indebtedness not in the ordinary course of business, to which we or our subsidiaries were or are a party, or in which we or our subsidiaries were or are a participant, in which the amount involved exceeded or exceeds the lesser of (i) \$120,000 or (ii) one percent of the average of our total assets at year-end for the last two completed fiscal years and in which any related party had or will have a direct or indirect material interest. A “related party” includes:

- any person who is, or at any time during the applicable period was, one of our executive officers or one of our directors;
- any person who beneficially owns more than 5% of our common stock;
- any immediate family member of any of the foregoing; or
- any entity in which any of the foregoing is a partner or principal or in a similar position or in which such person has a 10% or greater beneficial ownership interest.

In March 2021, our board of directors adopted a written related-party transactions policy. Pursuant to this policy, the Audit Committee of our board of directors will review all material facts of all related-party transactions and either approve or disapprove entry into the related-party transaction, subject to certain limited exceptions. In determining whether to approve or disapprove entry into a related-party transaction, our Audit Committee shall take into account, among other factors, the following: (i) whether the related-party transaction is on terms no less favorable to us than terms generally available from an unaffiliated third party under the same or similar circumstances; (ii) the extent of the related party’s interest in the transaction; and (iii) whether the transaction would impair the independence of a non-employee director.

Related Party Transactions

Other than compensation arrangements for our named executive officers and directors, which we describe herein, the only related party transactions to which we were a party during the years ended December 31, 2020 and 2019, since December 31, 2020, or any currently proposed related party transaction, are as follows, each of which was entered into prior to the adoption of the approval procedures described above.

William C. St. Laurent. William C. St. Laurent was a co-founder of our company and was the Chairman of our board of directors until March 18, 2021. During the years ended December 31, 2021 and 2019, we entered into the following transactions with Mr. St. Laurent or members of his immediate family or entities affiliated with such one or more of such persons.

- From January 31, 2019 to April 8, 2019, we sold to St. Laurent Investments LLC, a private investment fund of the St. Laurent family of which Mr. St. Laurent is the managing partner, a series of convertible promissory notes in the aggregate principal amount of \$545,000. Each promissory note originally had a one-year term and bore interest at the rate of 10% per annum and is convertible into shares of our common stock at a price of \$3.10 per share. In connection with such sales, we also issued to St. Laurent Investments LLC five-year warrants to purchase an aggregate of 10,518 shares of common stock.
- From April 29, 2019 to April 29, 2020, we sold to St. Laurent Investments LLC a series of non-convertible promissory notes in the aggregate principal amount of \$1,375,000. Each promissory note originally had a one-year term, which has been extended to July 31, 2022, and bears interest at the rate of 10% per annum.

We have not made any payments of principal or interest on the promissory notes issued to St. Laurent Investments LLC but have converted the accrued interest on these promissory notes through December 31, 2020 into a promissory note as of December 31, 2020 that bears interest at the rate of 10% per annum and matures on July 31, 2022. These notes totaling \$1,691,730 will be converted into 521,896 shares of our common stock in connection with the closing of this offering.

- On January 11, 2021, The Georges C. St. Laurent Jr. Trust, a trust for which Mr. St. Laurent is the settlor, purchased from us in a private placement a unit consisting of a 10% senior secured convertible promissory note in the principal amount of \$100,000 and five-year warrants to purchase 26,666 shares of our common stock at a purchase price of \$4.10 per share, subject to adjustment. The promissory note has a conversion price of \$3.75 per share, subject to adjustment, of which the principal will convert on the closing of this offering into 26,666 shares of our common stock and the accrued interest will be paid out of the cash proceeds.

At March 31, 2021, we had outstanding payables to William C. Laurent and certain of his affiliated entities in the aggregate amount of \$200,433 for services rendered prior to January 1, 2019. The names of the affiliated entities, the amounts owed to each such entity and a description of the services rendered by each such entity to our company is set out in Note 5 to our unaudited condensed consolidated financial statements for the three-month periods ended March 31, 2021 and 2020 included elsewhere in this prospectus.

Daniel Jones. During 2019 and 2020, Daniel Jones, our Chief Executive Officer, made a series of non-interest-bearing demand loans to us in the amounts of \$36,000 and \$33,000, respectively, of which \$14,500 was repaid in 2019 and \$35,000 was repaid in 2020. The outstanding principal amount of these unpaid loans was \$26,000 at the year ended December 31, 2020. We expect to repay these loans in full with a portion of the net proceeds of this offering.

DESCRIPTION OF CAPITAL STOCK

The following is a summary of the rights of our common stock and preferred stock, certain provisions of our amended and restated certificate of incorporation and our amended and restated bylaws as they will be in effect upon completion of this offering and applicable law. This summary does not purport to be complete and is qualified in its entirety by the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, copies of which have been or will be filed as exhibits to the registration statement of which this prospectus is a part.

Authorized Capital Stock

Immediately prior to the completion of this offering and upon the filing of our amended and restated certificate of incorporation, our authorized capital stock will consist of 80,000,000 shares of common stock, par value \$0.00001 per share, and 20,000,000 shares of undesignated preferred stock, par value \$0.00001 per share.

Common Stock

As the date of this prospectus, and after giving effect to the conversion of all of our outstanding preferred stock, convertible notes and promissory notes into common stock in connection with this offering, there will be 8,637,379 shares of common stock issued and outstanding.

Under the terms of our amended and restated certificate of incorporation, holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders, including the election of directors, and do not have cumulative voting rights. The holders of outstanding shares of common stock are entitled to receive dividends out of assets or funds legally available for the payment of dividends at such times and in such amounts as our board of directors from time to time may determine. Our common stock is not entitled to pre-emptive rights and is not subject to conversion or redemption. Upon liquidation, dissolution or winding up of our company, the assets legally available for distribution to stockholders are distributable ratably among the holders of our common stock after payment of liquidation preferences, if any, on any outstanding payment of other claims of creditors. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

As the date of this prospectus, there are 3,125,000 outstanding shares of Series A-1 preferred stock, which will be converted into 1,689,183 shares of common stock immediately prior to the closing of this offering, and 2,666,665 outstanding shares of Series A-2 preferred stock, which will be converted into 1,441,439 shares of common stock immediately prior to the closing of this offering.

Upon the closing of this offering, we will have no shares of our preferred stock outstanding, but our board of directors will be authorized, without further action by the stockholders, to create and issue one or more series of preferred stock and to fix the rights, preferences and privileges thereof. Among other rights, our board of directors may determine, without further vote or action by our stockholders:

- the number of shares constituting the series and the distinctive designation of the series;
- the dividend rate on the shares of the series, whether dividends will be cumulative, and if so, from which date or dates, and the relative rights of priority, if any, of payment of dividends on shares of the series;
- whether the series will have voting rights in addition to the voting rights provided by law and, if so, the terms of the voting rights;
- whether the series will have conversion privileges and, if so, the terms and conditions of conversion;
- whether or not the shares of the series will be redeemable or exchangeable, and, if so, the dates, terms and conditions of redemption or exchange, as the case may be;

[Table of Contents](#)

- whether the series will have a sinking fund for the redemption or purchase of shares of that series, and, if so, the terms and amount of the sinking fund; and
- the rights of the shares of the series in the event of our voluntary or involuntary liquidation, dissolution or winding up and the relative rights or priority, if any, of payment of shares of the series.

Although we presently have no plans to issue any shares of preferred stock upon completion of the offering, any future issuance of shares of preferred stock, or the issuance of rights to purchase preferred shares, could, among other things, decrease the amount of earnings and assets available for distribution to the holders of common stock or could adversely affect the rights and powers, including voting rights, of the holders of the common stock.

Options

As of March 31, 2021, we had outstanding options to purchase an aggregate 818,915 shares of our common stock with a weighted-average exercise price of \$1.77 per share, all of which were issued under the 2014 Plan.

Warrants

As of March 31, 2021, we had outstanding warrants to purchase an aggregate of 711,946 shares of our common stock, with a weighted-average exercise price of \$2.65 per share that expire between September 2021 and April 2024. Additional information with respect to our outstanding warrants as of March 31, 2021 is set forth in Note 9 of the Notes to our unaudited condensed consolidated financial statements for the three-month periods ended March 31, 2021 and 2020 included in this prospectus.

Warrants Offered in this Offering

The following summary of certain terms and provisions of the Warrants offered hereby is not complete and is subject to, and qualified in its entirety by the provisions of the form of Warrant, which is filed as an exhibit to the registration statement of which this prospectus is a part. Prospective investors should carefully review the terms and provisions set forth in the form of Warrant.

The Warrants issued in this offering entitle the registered holders to purchase common stock at a price equal to \$ _____ per share, subject to adjustment as discussed below, immediately following the issuance of such Warrants and terminating at 5:00 p.m., New York City time, five years after the closing of this offering.

The exercise price and number of shares of common stock issuable upon exercise of the Warrants may be adjusted in certain circumstances, including in the event of a stock dividend or recapitalization, reorganization, merger or consolidation. However, the Warrants will not be adjusted for issuances of shares of common stock at prices below its exercise price.

Exercisability. The Warrants are exercisable immediately upon issuance and at any time up to the date that is five years from the date of issuance. The Warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of common stock purchased upon such exercise. Each Warrant entitles the holder thereof to purchase one share of common stock. Warrants are not exercisable for a fraction of a share and may only be exercised into whole numbers of shares. In lieu of fractional shares, we will, pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price and round down to the nearest whole share. Unless otherwise specified in the Warrant, the holder will not have the right to exercise the Warrants, in whole or in part, if the holder (together with its affiliates) would beneficially own in excess of 4.99% (or 9.99% at the holder's election) of the number of our shares of common stock outstanding immediately after giving effect to the exercise, as such percentage is determined in accordance with the terms of the Warrant. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99% upon at least 61 days' prior notice from the holder to us.

Exercise Price. The exercise price per share of common stock purchasable upon exercise of the Warrants is no less than 100% of the public offering price per Unit, and is subject to adjustments for stock splits, reclassifications, subdivisions, and other similar transactions. In addition to the exercise price per share of common stock, and other applicable charges and taxes are due and payable upon exercise.

Warrant Agent; Global Certificate. The Warrants will be issued in registered form under a warrant agency agreement between a warrant agent and us. The Warrants will initially be represented only by one or more global warrants deposited with the warrant agent, as custodian on behalf of The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

Listing; Transferability. We have applied for listing of the Warrants on Nasdaq. However, without an active trading market, the liquidity of the Warrants will be limited. We intend to have the Warrants issued in registered form under the warrant agency agreement between us and the warrant agent. Subject to applicable laws, the Warrants may be transferred at the option of the holders upon surrender of the Warrants to the warrant agent, together with the appropriate instruments of transfer.

Rights as a Shareholder. Except by virtue of such holder's ownership of our common stock, the holder of Warrants does not have rights or privileges of a shareholder, including any voting rights, until the holder exercises such Warrant.

Registration Rights

Demand Registration Rights

Pursuant to our investors' rights agreements with the holders of our outstanding shares of Series A-1 preferred stock and our Series A-2 preferred stock, subject to certain terms of limitation, parties to such agreement holding at least 50% of the registrable securities (as defined therein as (i) common stock issuable or issued upon conversion of our preferred stock; (ii) common stock issued or issuable upon conversion and/or exercise of any other securities of our company acquired by investors after the date hereof; (iii) common stock issuable or issued upon the exercise of certain warrants to purchase shares of our common stock issued to certain investors and (iv) any common stock issued as a dividend or other distribution with respect to, or in exchange for or in replacement of the shares referenced in clauses (i) and (ii) above) can request that we file a registration statement with respect to not less than \$5 million in value of registrable securities. Under specified circumstances, we also have the right to defer filing of a requested registration statement for a period of 90 days. At March 31, 2021, the registrable securities under our investors' rights agreements consisted of an aggregate of 3,638,549 shares of our common stock.

Pursuant to the Underwriters' Warrants, the underwriters can request that we file up to two registration statements registering all or a portion of the common stock issued or issuable upon exercise of such Underwriters' Warrant. Under specified circumstances, we have the right to defer filing of a requested registration statement for a period of not more than 60 days, which right may not be exercised more than once during any period of 12 consecutive months. These registration rights are subject to additional conditions and limitations, including that the underwriters are required to pay all of the expenses for the second demand registration.

Form S-3 Demand Registration Rights

Pursuant to our investors' rights agreements, subject to certain terms of limitation, parties to such agreements holding at least 20% of the registrable securities have the right to demand that we file additional registration statements on Form S-3, including a shelf registration statement, for such holders with respect to not less than \$1 million of registrable securities. Under specified circumstances, we also have the right to defer filing of a requested registration statement for a period of 90 days.

Piggyback Registration Rights

Pursuant to our investors' rights agreements and the Underwriters' Warrants, whenever we propose to file a registration statement under the Securities Act, other than with respect to a registration related to employee benefit or similar plans, or corporate reorganizations or other transactions under Rule 145 under the Securities Act, the holders of registrable securities are entitled to notice of the registration and have the right to include their registrable securities in such registration. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement, including the right to exclude all such stockholder shares from this offering.

Expenses of Registration

We are required to pay expenses except for underwriting discounts, selling commissions, and stock transfer taxes relating to any Form S-3 or piggyback registration by the holders of registerable securities under the amended and restated investors' rights agreement, subject to certain limitations.

Expiration of Registration Rights

The registration rights described under our amended and restated investors' rights agreement will expire for each holder at such time (i) the company liquidates, (ii) Rule 144 or another similar exemption under the Securities Act is available for the sale of such investors' shares without limitation during a three-month period without registration, and (iii) the second anniversary of this offering.

Limitation of Liability and Indemnification Matters

Our amended and restated certificate of incorporation, which will become effective upon the completion of this offering, will limit the liability of our directors for monetary damages for breach of their fiduciary duties, except for liability that cannot be eliminated under the DGCL. Consequently, our directors will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except liability for any of the following:

- any breach of their duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases, or redemptions as provided in Section 174 of the DGCL; or
- any transaction from which the director derived an improper personal benefit.

Our amended and restated bylaws will also provide that we will indemnify our directors and executive officers and may indemnify our other officers and employees and other agents to the fullest extent permitted by law. Our amended and restated bylaws also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in this capacity, regardless of whether our amended and restated bylaws would permit indemnification. We plan on obtaining directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and may be unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

Indemnification of Officers and Directors

Our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective in connection with the completion of this offering, will provide that we will indemnify each of our directors and officers to the fullest extent permitted by the DGCL.

To the best of our knowledge, during the past two fiscal years, other than as set forth above, there were no material transactions, or series of similar transactions, or any currently proposed transactions, or series of similar transactions, to which we were or are to be a party, in which the amount involved exceeds the lesser of (A) \$120,000 or (B) one percent of our average total assets at year-end for the last two completed fiscal years, and in which any

director or executive officer, or any security holder who is known by us to own of record or beneficially more than 5% of any class of our common stock, or any member of the immediate family of any of the foregoing persons, has an interest (other than compensation to our officers and directors in the ordinary course of business).

Delaware Anti-Takeover Law and Provisions of Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Some provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: an acquisition of us by means of a tender offer; an acquisition of us by means of a proxy contest or otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Anti-Takeover Law

We are subject to Section 203 of the DGCL. Section 203 generally prohibits a publicly traded corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding specified shares; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 $\frac{2}{3}$ % of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a “business combination” to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an “interested stockholder” as any person that is:

- the owner of 15% or more of the outstanding voting stock of the corporation;
- an affiliate or associate of the corporation who was the owner of 15% or more of the outstanding voting stock of the corporation at any time within three years immediately prior to the relevant date; or
- the affiliates and associates of the above.

Under specific circumstances, Section 203 makes it more difficult for an “interested stockholder” to effect various business combinations with a corporation for a three-year period, although the stockholders may, by adopting an amendment to the corporation’s certificate of incorporation or bylaws, elect not to be governed by this section, effective 12 months after adoption.

Our amended and restated certificate of incorporation and amended and restated bylaws do not exclude us from the restrictions of Section 203. We anticipate that the provisions of Section 203 might encourage companies interested in acquiring us to negotiate in advance with our board of directors since the stockholder approval requirement would be avoided if a majority of the directors then in office approve either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder.

Undesignated Preferred Stock

The ability of our board of directors, without action by the stockholders, to issue up to 20,000,000 shares of undesignated preferred stock with voting or other rights or preferences as designated by our board of directors could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board, chief executive officer or president, or by a resolution adopted by a majority of our board of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Elimination of Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and amended and restated bylaws do not allow stockholders to act by written consent without a meeting.

Removal of Directors

Our amended and restated certificate of incorporation provides that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of the total voting power of all of our outstanding voting stock then entitled to vote in the election of directors.

Staggered Board

Our amended and restated certificate of incorporation provides for a staggered board of directors whereby directors serve staggered three-year terms.

Stockholders Not Entitled to Cumulative Voting

Our amended and restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our preferred stock may be entitled to elect.

Choice of Forum

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative form, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for the following types of actions or proceedings under Delaware Statutory or Common law: (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders; (3) any action asserting a claim against us arising pursuant to any provision of the DGCL or our amended and restated certificate of incorporation or amended and restated bylaws; or (4) any action asserting a claim governed by the internal affairs doctrine. Our amended and restated certificate of incorporation also provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to this choice of forum provision. It is possible that a court of law could rule that the choice of forum provision contained in our amended and restated certificate of incorporation is inapplicable or unenforceable if it is challenged in a proceeding or otherwise. This choice of forum provision has important consequences to our stockholders.

Amendment Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue preferred stock, would require approval by holders of at least 66 $\frac{2}{3}$ % of the total voting power of all of our outstanding voting stock.

The provisions of the DGCL, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Elimination of Monetary Liability for Officers and Directors

Our amended and restated certificate of incorporation incorporates certain provisions permitted under the DGCL relating to the liability of directors. The provisions eliminate a director's liability for monetary damages for a breach of fiduciary duty. Our amended and restated certificate of incorporation also contains provisions to indemnify the directors, officers, employees or other agents to the fullest extent permitted by the DGCL. We believe that these provisions will assist us in attracting and retaining qualified individuals to serve as directors.

Exchange Listing

We have applied to list our common stock and Warrants on the Nasdaq Capital Market under the trading symbols "SQL" and "SQLLW," respectively.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock and the warrant agent for the Warrants is VStock Transfer, LLC. The address of VStock Transfer, LLC is 18 Lafayette Place, Woodmere, NY 11598 and its telephone number is (212) 828-8436.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock. Future sales of substantial amounts of our common stock in the public market following this offering, or the possibility of such sales occurring, could cause the prevailing market price of our common stock to fall and impede our ability to raise capital through an offering of equity securities.

Upon the completion of this offering, we will have a total of 10,953,168 shares of common stock outstanding, assuming an initial public offering price of \$4.75 per Unit and assuming no exercise by the underwriters' option to purchase additional shares of common stock, and no exercise or conversion of outstanding options or warrants to purchase shares of common stock prior to completion of this offering. All of the shares sold in this offering will be freely tradable unless held by our "affiliates," as defined in Rule 144 under the Securities Act. Shares purchased by affiliates may generally only be sold pursuant to an effective registration statement under the Securities Act or in compliance with Rule 144.

Lock-Up Agreements

Our stockholders who beneficially own less than 5% of our outstanding shares of common stock, who own beneficially approximately 3.5 million shares of our common stock in the aggregate, are not subject to any lock-up agreements. These shares will be eligible for sale in the public market immediately after effectiveness of this registration statement, subject to Rule 144 under the Securities Act.

However, we and certain of our executive officers, directors and holders of 5% or more of our outstanding common stock have entered into "lock-up" agreements. As a result of these contractual restrictions and the provisions of Rules 144 and 701 promulgated under the Securities Act, in addition to the shares that may be immediately sold by our non-affiliated stockholders, an aggregate of approximately 6.6 million shares of common stock (including shares issued upon exercise of warrants and options) will be eligible for sale in the public market upon expiration of lock-up agreements, if any, 180 days after the date of this prospectus, subject, in certain circumstances to the volume, manner of sale and other limitations under Rule 144 and Rule 701, assuming the exercise of all outstanding options and warrants. The representatives may, in their discretion, release any of the securities subject to these lock-up agreements at any time.

Rule 144

In general, under Rule 144, as amended, a person (or persons whose shares are required to be aggregated) who is not deemed to have been an affiliate of ours at any time during the three months preceding a sale, and who has beneficially owned our common stock for at least six months, including the holding period of any prior owner other than one of our affiliates, is entitled to sell those shares, subject only to the availability of current public information about us and provided that we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. If such person has held our shares for at least one year, such person can resell such shares under Rule 144(b)(1) without regard to any Rule 144 restrictions, including the 90-day public company and current public information requirements.

A person (or persons whose shares are aggregated) who is deemed to be an affiliate of ours and who has beneficially owned restricted securities within the meaning of Rule 144 for at least six months would be entitled to sell within any three-month period a number of shares that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding, which will equal approximately 110,000 shares immediately after this offering (assuming a public offering price of \$4.75 per Unit, the midpoint of the initial public offering price range reflected on the cover page of this prospectus, no exercise of the underwriters' option to purchase additional shares and no exercise of the Warrants); or
- the average weekly trading volume of our common stock on the Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Such sales are also subject to certain manner of sale provisions, notice requirements and the availability of current public information about us.

Rule 701

Under Rule 701 under the Securities Act, shares of our common stock acquired upon the exercise of currently outstanding options or pursuant to other rights granted under our stock plan may be resold, by:

- persons, other than affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject only to the manner-of-sale provisions of Rule 144; and
- our affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject to the manner-of-sale and volume limitations, current public information and filing requirements of Rule 144, in each case, without compliance with the six-month holding period requirement of Rule 144.

Notwithstanding the foregoing, our Rule 701 shares held by our executive officers and directors are subject to lock-up agreements as described above and in the section titled “Underwriting” and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Form S-8 Registration Statement

We intend to file a registration statement on Form S-8 under the Securities Act after the closing of this offering to register the shares of our common stock that are issuable pursuant to our 2014 Plan. The registration statement is expected to be filed and become effective as soon as practicable after the completion of this offering. Accordingly, shares registered under the registration statement will be available for sale in the open market following its effective date, subject to Rule 144 volume limitations applicable to affiliates and the lock-up arrangement described above, if applicable.

Registration Rights

After the closing of this offering, the holders of the Underwriters’ Warrants may exercise their warrants for shares of our common stock. These holders will be entitled to certain rights with respect to the registration of such shares under the Securities Act. If we register any securities for public sale other than for our initial public offering, these holders will have the right to include their shares in the registration statement. In an underwritten offering, we have agreed to use our best efforts to cause the shares to be included in the underwriting on the same terms and conditions as the securities being sold through any such underwriters.

Pursuant to our amended and restated investors’ rights agreement, subject to certain terms of limitation, parties to such agreement holding at least 20% of the registrable securities have the right to demand that we file additional registration statements, including a shelf registration statement, for such holders on Form S-3. Under specified circumstances, we also have the right to defer filing of a requested registration statement for a period of 90 days.

Pursuant to our amended and restated investors’ rights agreement and Underwriters’ Warrants, whenever we propose to file a registration statement under the Securities Act, other than with respect to a registration related to employee benefit or similar plans, or corporate reorganizations or other transactions under Rule 145 under the Securities Act, the holders of registrable securities are entitled to notice of the registration and have the right to include their registrable securities in such registration. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement, including the right to exclude all such stockholder shares from this offering.

UNDERWRITING

Maxim Group LLC is acting as sole book-running manager of the offering, and we have entered into an underwriting agreement on the date of this prospectus, with them as representative of the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters and the underwriters have agreed to purchase from us, at the public offering price per unit less the underwriting discounts set forth on the cover page of this prospectus.

The underwriting agreement provides that the underwriters are obligated to purchase all the units in the offering if any are purchased, other than those shares and/or Warrants covered by the over-allotment option described below. The underwriting agreement also provides that if an underwriter defaults the purchase commitments of non-defaulting underwriters may be increased or the offering may be terminated.

Over-allotment Option

The underwriters are offering the units, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel including the validity of the shares and Warrants, and subject to other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officer's certificates and legal opinions. The offering of the units by the underwriters is also subject to the underwriters' right to reject any order in whole or in part.

We have granted to the underwriters a 45-day option to purchase on a pro rata basis up to 347,368 additional shares and/or Warrants to purchase up to 347,368 additional shares (15% of the shares of common stock and Warrants sold in the offering) at the initial public offering price less the underwriting discounts and commissions. The option may be exercised only to cover any over-allotments of our common stock and/or Warrants.

Discounts and Commissions

The underwriters propose to offer the units initially at the public offering price on the cover page of this prospectus and to selling group members at that price less a selling concession of \$ per unit equal to 8% of the public offering price. The underwriters and selling group members may allow a discount of \$ per unit on sales to other broker/dealers. After the initial public offering the representatives may change the public offering price and concession and discount to broker/dealers.

The following table shows the public offering price, underwriting discount and proceeds, before expenses, to us. The information assumes either no exercise or full exercise by the underwriters of their over-allotment option.

	Per Unit	Total Without Over-Allotment Option	Total with Over-Allotment Option
Public offering price	\$	\$	\$
Underwriting discount (8%)	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

We estimate that our out of pocket expenses for this offering (not including any underwriting discounts and commissions) will be approximately \$610,000. The underwriters will not confirm sales to any accounts over which they exercise discretionary authority without first receiving a written consent from those accounts.

We will bear all of our fees, disbursements and expenses in connection with this offering. The underwriting agreement, however, provides that in the event the offering is terminated, any advance expense deposits paid to the underwriters will be returned to the extent that offering expenses are not actually incurred in accordance with FINRA Rule 5110(g)(4)(A).

We have also agreed to pay for a certain amount of the underwriters' accountable expenses including actual accountable road show expenses for the offering, the cost associated with the underwriters' use of book-building and compliance software for the offering, reasonable and documented fees and disbursements of the underwriters' counsel, background checks of our officers and directors, and other offering related expenses up to \$125,000, including the fees and disbursements of the underwriters' counsel. We have paid \$25,000 to Maxim as an advance to be applied towards reasonable out-of-pocket expenses (which we refer to as the Advance). Any portion of the Advance shall be returned back to us to the extent not actually incurred.

We have agreed to issue to the underwriters the Underwriters' Warrants exercisable for 115,789 shares of common stock, equal to 5% of the units sold in the offering at a price equal to 110% of the public offering price, to be allocated in full to the underwriters or their designated affiliates. The Underwriters' Warrants are not included in the securities being sold in this offering. The shares issuable upon exercise of the Underwriters' Warrants are identical to those offered by this prospectus.

The Underwriters' Warrants will be exercisable at a per share price of \$5.22, which equals 110% of the public offering price, beginning six months after the effective date of the registration statement of which this prospectus is a part, which we refer to as the effective date, and for a period of five years from the effective date. As is customary, the number of shares to be issued under the Underwriters' Warrants and the exercise price will be subject to adjustments in certain events, including stock splits, stock dividends, and recapitalizations. Such warrants will be exercisable at any time, and from time to time, in whole or in part, commencing 180 days from the effective date of this offering. Such warrants and the common stock underlying such warrants will be deemed compensation by FINRA and will therefore be subject to a 180-day lock-up pursuant to Rule 5110(g)(1) of FINRA. The underwriter (or permitted assignees under Rule 5110(g)(1)) will not sell, transfer, assign, pledge or hypothecate such warrants or the securities underlying such warrants, nor will it engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of such warrants or the underlying securities for a period of 180 days from the date of effectiveness of the registration statement. The terms and number of shares underlying the Underwriters' Warrants shall be modified if necessary to comply with FINRA rules or regulations.

Pursuant to the Underwriters' Warrants, the underwriters can request that we file up to two registration statements registering all or a portion of the common stock issued or issuable upon exercise of such Underwriters' Warrant. Under specified circumstances, we have the right to defer filing of a requested registration statement for a period of not more than 60 days, which right may not be exercised more than once during any period of 12 consecutive months. These registration rights are subject to additional conditions and limitations, including that the underwriters are required to pay all of the expenses for the second demand registration. We are registering the offer and sale of the Underwriters' Warrants (and underlying shares of common stock) under the registration statement of which this prospectus is a part. The Underwriters' Warrants will also contain unlimited piggy-pack registration rights for a period of three years after the closing of the offering.

Right of First Refusal

Upon the closing of this offering, we will grant to Maxim Group LLC the right of first refusal to act as lead underwriter and book-running manager and/or sole placement agent for any and all future public and private equity and debt (excluding commercial bank debt) offerings or as exclusive financial advisor with respect to any merger, acquisition, or sale of stock or assets during such eighteen (18) month period of the Company, or any successor to or any subsidiary of the Company. The parties agree that the provisions of the preceding sentence shall not be applicable to financing provided by or solicited from any person or entity who is a current holder of the Company's debt or equity.

Lock-up Agreements

We have agreed that we will not offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, or file with the SEC a registration statement under the Securities Act relating to, any shares of our common stock, or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, without the prior written consent of the representatives for a period of 180 days after the date of this prospectus, except (a) issuances pursuant to the conversion or exchange of convertible or exchangeable securities (including cashless or "net" exercises, other than broker-assisted cashless exercises) or the exercise of warrants or options, in each case outstanding on the date of this prospectus and described in this prospectus, (b) grants of employee stock options pursuant to the terms of a plan described in this prospectus, (c) issuances pursuant to the exercise of such options, or (d) satisfaction of certain existing contractual obligations.

Our directors, officers and stockholders beneficially owning 5% or more of our common stock, who collectively own 6,625,221 shares of common stock, have agreed that, subject to certain exceptions, for a period of 180 days after the date of this prospectus, they will not, without the prior written consent of the representatives, directly or indirectly, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale, or

otherwise dispose of or hedge any of our shares of common stock, any options or warrants to purchase our shares of common stock, or any securities convertible into, or exchangeable for or that represent the right to receive our shares of common stock. The representatives may, in their discretion, release any of the securities subject to these lock-up agreements at any time. Upon the expiration of the lock-up period, all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above.

Pricing of the Offering

Prior to this offering, there has been no public market for our securities. The initial public offering price will be negotiated between us and the representatives. In determining the initial public offering price of our common stock and Warrants, the representatives will consider:

- the prospects for the industry in which we compete;
- our financial information;
- the ability of our management and our business potential and earning prospects;
- the prevailing securities markets at the time of this offering; and
- the recent market prices of, and the demand for, publicly traded shares of generally comparable companies.

We have applied to list the shares of our common stock and Warrants on the Nasdaq Capital Market under the symbol “SQL” and “SQLLW,” respectively.

Indemnification

We have agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act, liabilities arising from breaches of the representations and warranties contained in the underwriting agreement and to contribute to payments that the underwriters may be required to make for these liabilities.

Price Stabilization

In connection with the offering the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act.

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.
- Over-allotment involves sales by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that they may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriters may close out any covered short position by either exercising their over-allotment option and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. If the underwriters sell more shares than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.

- Penalty bids permit the representative to reclaim a selling concession from a syndicate member when the common stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the Nasdaq or otherwise and, if commenced, may be discontinued at any time.

Electronic Distribution

A prospectus in electronic format may be made available on the web sites maintained by one or more of the underwriters, or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representatives may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations.

Selling Restrictions

Canada. The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriters conflicts of interest in connection with this offering.

European Economic Area. In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any securities may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any securities may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of securities shall result in a requirement for the publication by us or any underwriters of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any securities to be offered so as to enable an investor to decide to purchase any securities, as

the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression “Prospectus Directive” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

Israel. This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In the State of Israel, this document is being distributed only to, and is directed only at, and any offer of the shares is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and “qualified individuals”, each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors will be required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

United Kingdom. Each underwriter has represented and agreed that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the FSMA) received by it in connection with the issue or sale of the securities in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

Switzerland. The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (the SIX) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). Accordingly, no public distribution, offering or advertising, as defined in CISA, its implementing ordinances and notices, and no distribution to any non-qualified investor, as defined in CISA, its implementing ordinances and notices, shall be undertaken in or from Switzerland, and the investor protection afforded to acquirers of interests in collective investment schemes under CISA does not extend to acquirers of securities.

Australia. No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission (ASIC), in relation to the offering.

This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the Corporations Act) and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the securities may only be made to persons (the Exempt Investors) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the securities without disclosure to investors under Chapter 6D of the Corporations Act.

The securities applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring securities must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in the Cayman Islands. No invitation, whether directly or indirectly, may be made to the public in the Cayman Islands to subscribe for our securities.

Taiwan. The securities have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the securities in Taiwan.

Notice to Prospective Investors in Hong Kong. The contents of this prospectus have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you are in any doubt about any of the contents of this prospectus, you should obtain independent professional advice. Please note that (i) our shares may not be offered or sold in Hong Kong, by means of this prospectus or any document other than to “professional investors” within the meaning of Part I of Schedule 1 of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) (SFO) and any rules made thereunder, or in other circumstances which do not result in the document being a “prospectus” within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong) (CO) or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO, and (ii) no advertisement, invitation or document relating to our shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere) which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the shares which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” within the meaning of the SFO and any rules made thereunder.

Notice to Prospective Investors in the People’s Republic of China. This prospectus may not be circulated or distributed in the PRC and the shares may not be offered or sold, and will not offer or sell to any person for re-offering or resale directly or indirectly to any resident of the PRC except pursuant to applicable laws, rules and regulations of the PRC. For the purpose of this paragraph only, the PRC does not include Taiwan and the special administrative regions of Hong Kong and Macau.

LEGAL MATTERS

Certain legal matters with respect to the shares of common stock offered hereby will be passed upon by Pryor Cashman LLP, New York, New York. Certain other legal matters will be passed upon for the underwriters by Ellenoff Grossman & Schole LLP, New York, New York.

EXPERTS

The consolidated financial statements of SeqLL Inc. as of December 31, 2020 and 2019 and for the years then ended have been audited by Wolf & Company, P.C., an independent registered public accounting firm, as stated in their report appearing herein. Such consolidated financial statements are included in this prospectus and registration statement in reliance upon the report of Wolf & Company, P.C. (which report expresses an unqualified opinion on the consolidated financial statements and includes an explanatory paragraph relating to our ability to continue as a going concern), appearing elsewhere herein, and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the securities offered in this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement and its exhibits and schedules, portions of which have been omitted as permitted by the rules and regulations of the SEC. For further information about us and our common stock, we refer you to the registration statement and to its exhibits and schedules. Statements in this prospectus about the contents of any contract, agreement or other document is not necessarily complete and, in each instance, we refer you to the copy of such contract, agreement or document filed as an exhibit to the registration statement, with each such statement being qualified in all respects by reference to the document to which it refers. You may inspect the registration statement and its exhibits and schedules and other information on SEC's website at www.sec.gov.

We also maintain a website at www.seqll.com, at which, following the completion of this offering, you may access our SEC filings free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference in, and is not part of, this prospectus. You may also request a copy of these filings, at no cost, by writing us at 317 New Boston Street, Suite 210, Woburn, Massachusetts 01801, or telephoning us at (781) 460-6016.

SEQLL INC.
CONSOLIDATED FINANCIAL STATEMENTS

Index to Consolidated Financial Statements

	Page
Audited Financial Statements for the year ended December 31, 2020 and 2019	
Report of Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets as of December 31, 2020 and 2019	F-3
Consolidated Statements of Operations for the Years Ended December 31, 2020 and 2019	F-4
Consolidated Statements of Changes in Stockholders' Deficit for the Years Ended December 31, 2020 and 2019	F-5
Consolidated Statements of Cash Flows for the Years Ended December 31, 2020 and 2019	F-6
Notes to Consolidated Financial Statements	F-7
Unaudited Interim Condensed Financial Statements for the Three-Month Periods Ended March 31, 2021 and 2020	
Condensed Consolidated Balance Sheets as of March 31, 2021 and December 31, 2020	F-19
Condensed Consolidated Statements of Operations for the Three Months ended March 31, 2021 and 2020	F-20
Condensed Consolidated Statements of Changes in Stockholders' Deficit for the Three Months ended March 31, 2021 and 2020	F-21
Condensed Consolidated Statements of Cash Flows for the Three Months ended March 31, 2021 and 2020	F-22
Notes to Unaudited Condensed Consolidated Financial Statements	F-23

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and the Stockholders of SeqLL Inc.:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of SeqLL Inc. (the “Company”) as of December 31, 2020 and 2019, the related consolidated statements of operations, changes in stockholders’ deficit and cash flows for the years then ended, and the related notes to the consolidated financial statements (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, 2020 and 2019, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Emphasis of a Matter Regarding Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has suffered recurring losses from operations and its total liabilities exceed its total assets. This raises substantial doubt about the Company’s ability to continue as a going concern. Management’s plans in regard to these matters also are described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

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 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/ Wolf & Company, P.C.

Boston, Massachusetts
March 30, 2021

We have served as the Company’s auditor since 2018.

SeqLL Inc.
Consolidated Balance Sheets

	<u>December 31,</u>	
	<u>2020</u>	<u>2019</u>
Assets		
Current assets		
Cash and cash equivalents	\$ —	\$ 5,863
Accounts receivable, net	30,714	54,700
Other receivable	108,815	80,969
Inventory	203,011	284,257
Prepaid expenses	—	2,354
Total current assets	<u>342,540</u>	<u>428,143</u>
Other assets		
Property and equipment, net	337,241	446,000
Other assets	14,262	14,262
Total assets	<u>\$ 694,043</u>	<u>\$ 888,405</u>
<u>Liabilities and Stockholders' Deficit</u>		
Current liabilities		
Accounts payable	\$ 861,840	\$ 897,658
Accrued expenses	123,639	271,060
Loan payable – related party	26,000	28,000
Deferred revenue	—	25,000
Total current liabilities	<u>1,011,479</u>	<u>1,221,718</u>
Non-current liabilities		
Non-convertible promissory notes	2,431,730	1,590,710
Convertible notes	1,105,000	905,000
Total non-current liabilities	<u>3,536,730</u>	<u>2,495,710</u>
Total liabilities	<u>4,548,209</u>	<u>3,717,428</u>
Commitments and contingencies (Note 12)		
Stockholders' equity (deficit)		
Preferred stock, \$0.00001 par value; 20,000,000 shares authorized; 5,791,665 shares issued and outstanding	58	58
Common stock, \$0.00001 par value; 80,000,000 shares authorized; 4,864,862 shares issued and outstanding	49	49
Additional paid-in capital	6,856,020	6,835,810
Accumulated deficit	<u>(10,710,293)</u>	<u>(9,664,940)</u>
Total stockholders' deficit	<u>(3,854,166)</u>	<u>(2,829,023)</u>
Total liabilities and stockholders' deficit	<u>\$ 694,043</u>	<u>\$ 888,405</u>

*See report of independent registered accounting firm and
notes to the consolidated financial statements.*

SeqLL Inc.
Consolidated Statement of Operations

	For the years ended December 31,	
	2020	2019
Revenue		
Sales	\$ 50,588	\$ 160,480
Grant revenue	278,907	372,649
Total revenue	329,495	533,129
Cost of sales	170,803	219,763
Gross profit	158,692	313,366
Operating expenses		
Research and development	330,979	1,245,168
General and administrative	777,435	1,359,497
Total operating expenses	1,108,414	2,604,665
Operating loss	(949,722)	(2,291,299)
Other (income) and expenses		
Other income	(191,566)	—
Interest expense	287,197	182,250
Net loss	<u>\$ (1,045,353)</u>	<u>\$ (2,473,549)</u>
Net loss per share – basic and diluted	<u>\$ (0.21)</u>	<u>\$ (0.51)</u>
Weighted average common shares – basic and diluted	<u>4,864,862</u>	<u>4,864,862</u>

*See report of independent registered accounting firm and
notes to the consolidated financial statements.*

SeqLL Inc.
Consolidated Statement of Changes in Stockholders' Deficit
For the years ended December 31, 2020 and 2019

	Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance as of							
December 31, 2018	<u>5,791,665</u>	<u>\$ 58</u>	<u>4,864,862</u>	<u>\$ 49</u>	<u>\$ 6,804,871</u>	<u>\$ (7,191,391)</u>	<u>\$ (386,413)</u>
Stock-based compensation expense	—	—	—	—	30,939	—	30,939
Net loss	—	—	—	—	—	(2,473,549)	(2,473,549)
Balance as of							
December 31, 2019	<u>5,791,665</u>	<u>\$ 58</u>	<u>4,864,862</u>	<u>\$ 49</u>	<u>\$ 6,835,810</u>	<u>\$ (9,664,940)</u>	<u>\$ (2,829,023)</u>
Stock-based compensation expense	—	—	—	—	20,210	—	20,210
Net loss	—	—	—	—	—	(1,045,353)	(1,045,353)
Balance as of							
December 31, 2020	<u>5,791,665</u>	<u>\$ 58</u>	<u>4,864,862</u>	<u>\$ 49</u>	<u>\$ 6,856,020</u>	<u>\$ (10,710,293)</u>	<u>\$ (3,854,166)</u>

*See report of independent registered accounting firm and
notes to the consolidated financial statements.*

SeqLL Inc.
Consolidated Statements of Cash Flows

	For the years ended December 31,	
	2020	2019
Cash Flows from Operating Activities		
Net loss	\$ (1,045,353)	\$ (2,473,549)
Adjustment to reconcile net loss to net cash used in operating activities:		
Depreciation	108,759	121,532
Stock-based compensation	20,210	30,939
Non-cash interest on loan payable	286,972	182,250
Changes in operating assets and liabilities:		
Accounts receivable, net	23,986	85,048
Other receivables	(27,846)	15,890
Prepaid expenses	2,354	59
Inventory	81,246	(4,959)
Other assets	—	15,471
Accounts payable	(35,818)	446,128
Accrued expenses	(147,421)	(29,140)
Deferred revenue	(25,000)	25,000
Net cash used in operating activities	(757,911)	(1,585,331)
Cash Flows from Financing Activities		
Proceeds from issuance of non-convertible promissory notes	554,048	960,000
Proceeds from issuance of convertible notes	200,000	545,000
Proceeds from loan payable – related party	33,000	36,000
Payment of loan payable – related party	(35,000)	(14,500)
Net cash provided by financing activities	752,048	1,526,500
Net decrease in cash	(5,863)	(58,831)
Cash and cash equivalents, beginning of year	5,863	64,694
Cash and cash equivalents, end of year	\$ —	\$ 5,863
Supplemental disclosure of cash flow information and non-cash transactions		
Conversion of 2020 accrued interest into promissory notes	\$ 426,020	\$ —

See report of independent registered accounting firm and notes to the consolidated financial statements.

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 1 — Nature of Operations and Basis of Presentation

SeqLL Inc. (the “Company” or “SeqLL”) was incorporated as a Delaware corporation on April 3, 2014. On April 8, 2014, SeqLL acquired a 100% ownership interest in SeqLL, LLC (“Subsidiary”), a domestic limited liability company formed on March 11, 2013 in the State of Massachusetts. SeqLL is a holding company of the Subsidiary and is a life sciences company focused on the development and application of innovative genetic analysis technologies and the monetization of that technology and related intellectual property. The Subsidiary purchased technology to enable the rapid analysis of large volumes of genetic material by directly sequencing single molecules of DNA or RNA. The Subsidiary’s principal office is located in Woburn, Massachusetts.

Risks and Uncertainties

The Company is subject to a number of risks similar to other companies in its industry, including rapid technological change, competition from larger pharmaceutical and biotechnology companies and dependence on key personnel.

The extent of the impact of the COVID-19 pandemic on the Company’s business continues to be highly uncertain and difficult to predict, as the responses that the Company, other businesses and governments are taking continue to evolve. Furthermore, capital markets and economies worldwide have also been negatively impacted by the COVID-19 pandemic, and it is possible that it could cause a lasting national and/or global economic recession. Policymakers around the globe have responded with fiscal policy actions to support the healthcare industry and economy as a whole. The magnitude and overall effectiveness of these actions remain uncertain.

The severity of the impact of the COVID-19 pandemic on the Company’s business will depend on a number of factors, including, but not limited to, the duration and severity of the pandemic and the extent and severity of the impact on the Company’s service providers, suppliers, contract research organizations and the Company’s clinical trials, all of which are uncertain and cannot be predicted. The COVID-19 pandemic has adversely affected our sales and results of operations during 2020 and may continue to adversely affect our business. The extent of which any prolonged continuation of the COVID-19 pandemic may in the future materially impact the Company’s financial condition, liquidity or results of operations is uncertain.

Going Concern

Since its inception, the Company has devoted substantially all of its effort to business planning, and research and development. The Company has incurred net losses of \$1,045,353 in 2020 and \$2,473,549 in 2019 and had negative cash flow from operating activities of \$757,911 and \$1,585,331 for the years ended December 31, 2020 and 2019, respectively, and had an accumulated deficit of \$10,710,293 as of December 31, 2020. These conditions among others, raise substantial doubt about the Company’s ability to continue as a going concern.

The Company’s ability to continue to operate as a going concern is dependent upon raising additional funds to finance its activities. The Company is in the process of filing an S-1 registration statement with the Securities and Exchange Commission (“SEC”) to raise up to \$12 million. However, there can be no assurances the SEC will approve the Company’s registration statement or, if approved, the Company will successfully complete an IPO. In the event the Company does not complete the IPO or secure other outside financing, it is anticipated by the Board of Directors and management that the Company’s primary investor would continue to fund the operating deficits as they have since the Company’s founding in 2013. However, there can be no assurances that the primary investor would continue to fund the Company’s operating deficits for the long-term.

The consolidated financial statements do not include any adjustments with respect to the carrying amounts of assets and liabilities and their classification that might be necessary should the Company be unable to continue as a going concern.

During the first quarter of 2021, the Company issued senior secured convertible promissory notes to individual investors, for the total of \$250,000.

The Company’s management and Board of Directors anticipate that the Company’s current financial resources along with the anticipated equity and debt financings to be raised in 2021 are sufficient to satisfy its operating requirements through December 31, 2021.

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 1 — Nature of Operations and Basis of Presentation (cont.)*Basis of Presentation*

The accompanying consolidated financial statements include the accounts of SeqLL and its wholly-owned subsidiary, SeqLL, LLC. All intercompany accounts and transactions have been eliminated in consolidation.

Note 2 — Significant Accounting Policies

A summary of significant accounting policies followed by the Company in the preparation of the accompanying consolidated financial statements are as follows:

Use of Estimates

The preparation of the financial statements in conformity with U.S. GAAP, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Significant estimates include, but are not limited to stock-based compensation expense, research and development accruals and fair value of common stock. Actual results could differ from those estimates and changes in estimates may occur.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with the maturity of three months or less at the purchase date to be cash equivalents. The Company had no cash and cash equivalents at December 31, 2020 and 2019.

Accounts Receivable

In the normal course of business, the Company provides credit to its customers and performs credit evaluations of these customers. The Company periodically reviews accounts receivables for doubtful accounts on a customer-by-customer basis and established an allowance to reserve for balances that are deemed uncollectible. The allowance for doubtful accounts was \$95,186 and \$64,866 as of December 31, 2020 and 2019, respectively.

Inventory

Inventory consists of finished goods, work-in-process and raw materials and is valued at the lower of cost or net realizable value, determined by the first-in, first-out (“FIFO”) method. As the Company manufactures the finished goods and work-in-process materials, overhead costs are included in inventory. The Company evaluates the carrying cost of finished goods, work-in-process and raw materials items. To the extent that such costs exceed future demand estimates and /or exhibit historical turnover at rates less than current inventory levels, the Company reduces the carrying value of the applicable inventories. Inventory consisted of the following:

	December 31,	
	2020	2019
Raw materials	\$ 59,416	\$ 67,706
Work in process	143,595	216,551
Total inventory	<u>\$ 203,011</u>	<u>\$ 284,257</u>

Property and Equipment

Property and equipment are recorded at cost and depreciated over the estimated useful lives of the related assets using the straight-line method. Lab equipment is depreciated over a five-year period. Leasehold improvements are depreciated over the shorter of the useful life and the term of the lease. When assets are retired or otherwise disposed of, the cost of these assets and related accumulated depreciation or amortization are eliminated from the balance sheet and any resulting gains or losses are included in the statement of operations in the period of disposals.

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 2 — Significant Accounting Policies (cont.)

Long-lived Assets

The Company assesses, on an annual basis, the recoverability of the carrying amount of long-lived assets used in continuing operations. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the future net cash flow expected to be generated by the asset. A loss is recognized when expected future cash flow (undiscounted and without interest) are less than the carrying amount of the asset. The impairment loss is determined as the difference by which the carrying amount of the asset exceeds its fair value. No impairments were recognized during the years ending December 31, 2020 and 2019.

Revenue Recognition

The Company's revenue is generated primarily from the sale of products and research services. Product revenue primarily consists of sales of genetic sequencing equipment and sequencing reagent kits. Research service revenue primarily consists of revenue generated from gene sequencing services and grants.

The Company recognizes revenue in accordance with Accounting Standards Codification ("ASC") Topic 606, Revenue from Contracts with Customers ("ASC 606"). Under ASC 606, the Company recognizes revenue when control of its products and services is transferred to its customers in an amount that reflects the consideration the Company expects to receive from its customers in exchange for those products and services. To determine the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of ASC 606, the Company performs a five-step process. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when (or as) the performance obligations have been satisfied. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. The Company only applies the five-step process to contracts when it is probable that the entity will collect consideration it expects to be entitled to in exchange for the goods or services it transfers to the customer.

The Company evaluates contingent payments to estimate the amount which is not probable of a material reversal to include in the transaction price using the most likely amount method. Future payments that are not within the Company's control and are not considered probable of being achieved until the contingencies are resolved.

Revenue from product sales, including customized sequencing instruments and sequencing reagent kits and off-the-shelf consumables, is recognized generally upon delivery, which is when control of the product is deemed to be transferred.

Revenue from gene sequencing services, using the tSMS platform, is recognized generally as the services are provided to the customer. The components of the sequencing process, including reagent kits and off-the-shelf consumables, sample loader and sequencer, are not distinct within the context of the gene sequencing service contract. This is because in a gene sequencing service contract the reagent kits and other components, such as off-the-shelf consumables, used in the sequencing process, become required inputs to achieve the specified gene sequencing analysis, and the components in the sequencing process are sequential in nature and highly-interrelated as they work together to generate sample-specific data.

The Company has elected to exclude sales tax from revenue. The Company generally has no obligations for returns, refunds and other similar obligations and does not provide separate equipment warranties. The Company recognized \$50,588 and \$158,480 in revenue from gene sequencing services for the years ended December 31, 2020 and 2019, respectively. The Company recognized \$0, and \$2,000 in revenue from product sales for the years ended December 31, 2020 and 2019, respectively.

Grant Revenue

The Company's grant revenues are derived from research programs by various departments of the National Institute of Health (NIH Grants).

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 2 — Significant Accounting Policies (cont.)

Grants awarded to the Company for research and development by government entities are outside the scope of ASC 606 guidance. This is because these granting entities are not considered to be customers and are not receiving reciprocal value for their grant support provided to the Company. These grants provide the Company with payments for certain types of expenditures in return for research and development activities over a contractually defined period.

The Company recognizes NIH Grants revenue as reimbursable grant costs are incurred up to pre-approved award limits within the budget period. The costs associated with these reimbursements are reflected as a component of research and development expense in the accompanying consolidated statements of operations. In the years ended December 31, 2020 and 2019, the Company earned grant revenue of \$278,907 and \$372,649, respectively.

Income Taxes

The Company utilizes the liability method of accounting for income taxes as required by ASC 740, *Income Taxes*. Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and the tax basis of assets and liabilities as well as net operating loss carryforwards and tax credits and are measured using enacted tax rates and laws that will be in effect when the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that these assets may not be realized. Currently, there is no provision for income taxes, as the Company has incurred operating losses to date, and a full valuation allowance has been provided on the net deferred tax assets.

The Company determines whether it is more likely than not that a tax position will be sustained upon examination. If it is not more likely than not that a position will be sustained, none of the benefit attributable to the position is recognized. The tax benefit to be recognized for any tax position that meets the more-likely-than-not recognition threshold is calculated as the largest amount that is more than 50% likely of being realized upon resolution of the contingency. The Company accounts for interest and penalties related to uncertain tax positions as part of its provision for income taxes.

The Company has no accruals for interest or penalties related to income tax matters. Tax years subsequent to 2016 remain open to examination by federal and state tax authorities.

Stock-based Compensation

The Company's share-based compensation program grants awards include stock options and restricted stock awards. The fair value of stock option grants is estimated as of the date of the grant using the Black-Scholes option pricing model. The fair value of restricted stock awards is based on the fair value of the Company's common stock on the date of the grant. The fair value of the stock-based awards are then expensed over the requisite service period, generally the vesting period, for each award.

The Company's expected stock price volatility assumption is based on the volatility of comparable public companies. The expected term of a stock option granted to employees and directors (including non-employee directors) is based on the average of the contractual term (generally 10 years) and the vesting period. For other non-employee options, the expected term is the contractual term. The risk-free interest rate is based on the yield of U.S. Treasury securities consistent with the life of the option. No dividend yield was assumed as the Company does not pay dividends on its common stock. The Company recognizes forfeitures related to stock-based awards as they occur.

The Company has periodically granted stock options and restricted stock awards to consultants for services, pursuant to the Company's stock plans at the fair market value on the respective dates of grant. Should the Company terminate any of its consulting agreements, the unvested options underlying the agreements would be cancelled. For awards granted to consultants and non-employees, compensation expense is recognized over the vesting period of the awards, which is generally the period services are rendered by such consultants and non-employees.

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 2 — Significant Accounting Policies (cont.)

The Company did not grant any stock options during the year ended December 31, 2020. The assumptions used in determining the fair value of share-based awards granted in 2019 are as follows:

	2019
Risk-free interest rate	2.18%
Expected option life	5.5
Expected dividend yield	—
Expected stock price volatility	69%

Research and Development Expenses

The Company expenses all research and development costs as incurred. Included in research and development costs are wages, stock-based compensation and benefits of employees and other operational costs related to the Company's research and development activities, including facility-related expenses and external costs of outside contractors engaged by the Company.

Segments

The Company operates in a single business segment that includes the design, development and manufacturing of genetic analysis technologies.

Net Loss per Share

Basic net loss per share is computed by dividing the net loss by the weighted-average number of shares of common stock outstanding for the period, without consideration for potentially dilutive securities if their effect is antidilutive. Diluted net loss per share is computed by dividing the net loss by the weighted average number of shares of common stock and dilutive common stock equivalents outstanding for the period determined using the treasury stock and if-converted methods. Dilutive common stock equivalents are comprised of convertible preferred stock, convertible promissory notes, options outstanding under the Company's stock option plan and warrants. For all periods presented, there is no difference in the number of shares used to calculate basic and diluted shares outstanding as inclusion of the potentially dilutive securities would be antidilutive.

The following potential shares of common stock were not considered in the computation of diluted net loss per share as their effect would have been antidilutive:

	December 31,	
	2020	2019
Convertible preferred stock	5,791,556	5,791,665
Convertible promissory notes	345,266	291,933
Stock options	818,915	886,483
Warrants for common stock	658,262	596,396

Recently Issued Accounting Standards

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-02, Leases ("ASU 2016-02") which establishes new accounting and disclosure requirements for leases. ASU No. 2016-02 requires recognition in the statement of operations of a single lease cost, calculated so that the cost of the lease is allocated over the lease term, generally on a straight-line basis. ASU 2016-02 requires classification of all cash payments within operating activities in the statement of cash flows. Disclosures are required to provide the amount, timing and uncertainty of cash flows arising from leases. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. The Company will adopt the provisions of ASU 2016-02 in the quarter beginning January 1, 2022.

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 2 — Significant Accounting Policies (cont.)

In August 2020, FASB issued ASU 2020-06, *Debt — Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging — Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity*, which, among other things, provides guidance on how to account for contracts on an entity’s own equity. This ASU eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. It also amends the accounting for certain contracts in an entity’s own equity that are currently accounted for as derivatives because of specific settlement provisions. In addition, this ASU modifies how particular convertible instruments and certain contracts that may be settled in cash or shares impact the diluted EPS computation. The amendments in this ASU are effective for the public companies for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020. The Company is currently evaluating the impact of ASU 2020-06 on its consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. This standard simplifies the accounting for income taxes by eliminating certain exceptions to the guidance in Topic 740 related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill and allocating consolidated income taxes to separate financial statements of entities not subject to income tax. ASU 2019-12 is effective for fiscal years beginning after December 15, 2020, with early adoption permitted. Upon adoption, the Company must apply certain aspects of this standard retrospectively for all periods presented while other aspects are applied on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year of adoption. The Company is currently evaluating the impact of this new standard on its consolidated financial statements.

Note 3 — Property and Equipment, net

Property and equipment are recorded at historical cost and consist of the following:

	December 31,	
	2020	2019
Lab equipment	\$ 735,715	\$ 735,715
Leasehold improvements	74,390	74,390
	810,105	810,105
Less: accumulated depreciation	(472,864)	(364,105)
	<u>\$ 337,241</u>	<u>\$ 446,000</u>

Depreciation expense amounted to \$108,759 and \$121,532 for the years ended December 31, 2020 and 2019, respectively.

Note 4 — Accrued Expenses

Accrued expenses consist of the following:

	December 31,	
	2020	2019
Accrued payroll expense	—	27,659
Accrued interest	100,031	239,079
Other	23,608	4,322
	<u>\$ 123,639</u>	<u>\$ 271,060</u>

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 5 — Stock Option Plan

The Company’s 2014 Equity Incentive Plan (the “2014 Plan”) permits the grant of options for its common stock and shares of common stock to its employees and certain non-employees for up to 1,081,081 shares.

As of December 31, 2020, there were 262,166 shares available for future issuance under the 2014 Plan. Generally, option awards are granted with an exercise price equal to the fair value of the Company’s stock at the date of grant and vest over a period of four years. No option may have a term in excess of ten years from the option grant date. Share awards generally vest over a period of four years. Certain option and share awards provide for accelerated vesting if there is a change in control (as defined by the 2014 Plan). The weighted average fair value of options granted was \$0.81 per share for the year ended December 31, 2019. No option awards were granted during the year ended December 31, 2020 and option awards to purchase 32,431 shares of the Company’s common stock were granted in 2019.

The stock option activity for the year ended December 31, 2020 is as follows:

	Number of Options	Weighted- Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in Years)
Outstanding as of December 31, 2019	886,483	\$ 1.78	7.57
Granted	—	—	—
Exercised	—	—	—
Cancelled/Forfeited	(67,568)	1.83	—
Outstanding as of December 31, 2020	818,915	1.77	6.52
Exercisable at December 31, 2020	668,421	\$ 1.62	6.26

During the years ended December 31, 2020 and 2019, the Company recorded \$20,210 and \$30,939 of stock-based compensation associated with vesting of stock options, respectively. As of December 31, 2020, there was approximately \$285,000 of unrecognized compensation expense related to unvested share-based compensation awards, which will be recognized over a weighted average period of approximately one year.

Note 6 — Related Party Transactions

During 2019 and 2020, Daniel Jones, our Chief Executive Officer, made a series of non-interest-bearing demand loans to us in the amounts of \$36,000 and \$33,000, respectively, of which \$14,500 was repaid in 2019 and \$35,000 was repaid in 2020. The outstanding principal amount of these unpaid loans was \$26,000 at the year ended December 31, 2020. We expect to repay these loans in full with a portion of the net proceeds of this offering.

At December 31, 2020 and December 31, 2019, the Company had the following outstanding payables to its majority shareholder for past services:

	As of December 31,	
	2020	2019
Floral Finance	\$ 9,849	\$ 9,849
Genomic Diagnostic Technologies	16,675	16,675
St. Laurent Institute	113,954	113,954
St. Laurent Realty, Inc.	27,913	27,913
Stonemill Center	16,627	16,627
William St. Laurent	15,415	15,000
Total related party payables	\$ 200,433	\$ 200,018

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 6 — Related Party Transactions (cont.)

William C. St. Laurent, a member of the Company's board of directors, relatives of Mr. St. Laurent and entities controlled by the St. Laurent family are controlling shareholders of the Company. These entities are all St. Laurent family-owned entities and are therefore related parties.

The Company issued the convertible notes and promissory notes to the related parties (see Note 7).

Note 7 — Notes Payable

The Company entered into a series of convertible promissory notes (the "Convertible Notes") through April 8, 2019 with certain preferred stockholder amounting to \$905,000.

The Convertible Notes have a one-year term and accrue interest at 10% per annum. The Convertible Notes are convertible at the lower of \$3.10 per share or a 20% discount to the share price paid by the purchasers of equity securities in the Company's next Qualified Financing, as defined in the convertible note agreement.

From April 29, 2019 to April 29, 2020, the Company entered into a series of non-convertible promissory notes (the "Promissory Notes") with a certain preferred stockholder amounting to \$1,375,000. The Promissory Notes have a one-year term with interest accruing at 10% per annum.

On December 31, 2020, the Company issued a non-convertible promissory note to St. Laurent Investments LLC amounting to \$426,020 due July 31, 2022 bearing 10% interest per annum in exchange for the accrued interest on all their notes outstanding.

Subsequent to December 31, 2020, the terms of all Convertible Notes and Promissory Notes issued before April 29, 2020 were extended through July 31, 2022. This modification was accounted on a prospective basis under the US GAAP guidance related to the debt modification.

In November and December 2020, the Company issued senior secured convertible promissory notes (the "Senior Convertible Notes") with a third-party investor amounting to \$200,000. These Senior Convertible Promissory notes accrue interest at 10% per annum, are repaid at the earlier of 24 months from issuance or the Company's next qualified financing of a minimum of \$7.5 million (as defined in the notes agreement), or convertible at \$3.75 per share.

In connection with these Senior Convertible Notes, the Company issued warrants to purchase the number of shares of common stock equal to 100% of the total amount of shares related to the noteholders upon conversion of these notes at the exercise price equal to \$4.10 per share and additional common stock purchase warrants as a placement fee equal to 8% of the total amount of potential new shares issued to investors.

In connection with all the Convertible Notes and Promissory Notes issued in 2019 and 2020, the Company issued warrants to noteholders to purchase the total of 72,384 shares of the Company's common stock, including 8,533 to the placement agent (see Note 9). The grant-date fair values of these warrants was immaterial.

For the years ended December 31, 2020 and 2019, interest expense was \$287,197 and \$182,250, respectively.

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 8 — Preferred Stock

The preferred stock detail as of December 31, 2020 and 2019 was as follows:

	Shares authorized	Shares issued	Issuance price per share
Series A-1 Convertible Preferred Stock		3,125,000	\$ 0.32
Series A-2 Convertible Preferred Stock		2,666,665	\$ 1.68
Series A Preferred Stock	20,000,000	5,791,665	

The rights and preferences at December 31, 2020 of the Series A-1 Preferred Stock (“Series A-1”) and Series A-2 Preferred Stock (“Series A-2”) collectively the “Preferred Stock”, are as follows:

Voting rights: Series A-1 and Series A-2 preferred stockholders are entitled to vote together with all other classes and series of stock and have the right to receive notice of any stockholder’s meetings. Each preferred stock is entitled to the number of votes equal to the number of shares of common stock into which each share of the applicable preferred stock is convertible at the time of such vote.

Conversion Rights: The Preferred Stock may be converted at any time at the election of the holder into Common Stock at an initial conversion price determined by dividing the Series A-1 Original Issue Price of \$0.32 by the Series A-1 Conversion Price of \$0.59; and the Series A-2 Original Issue Price of \$1.68 by the Series A-2 Conversion Price of \$3.10; both are subject to adjustment for stock splits, stock combinations and the like, and to a weighted-average adjustment for future issuances of Common Stock, warrants or rights to purchase Common Stock or securities convertible into Common Stock for a consideration per share that is less than the then-applicable conversion price, subject to certain exceptions listed in the Charter.

The Preferred Stock is subject to automatic conversion upon (i) the closing of an initial public offering of the Common Stock at a price per share equal to at least \$9.25 (as adjusted for any stock splits, stock dividends, combinations, subdivisions, recapitalization or the like) in an underwritten public offering in which the Company raises gross proceeds of at least \$10 million or (ii) the consent of holders of at least a majority of the then-outstanding shares of Preferred Stock voting together as a single class.

Liquidation Preferences: In the event of any voluntary or involuntary liquidation, deemed liquidation event, dissolution or winding up of the Company, as defined, the holders of the preferred stock are entitled to be paid out of the assets of the Company before any payments are to be made to any other shareholders. The liquidation price to be paid is the greater of the original issue price for Series A-1 (\$0.32 per share) and Series A-2 (\$1.68 per share), plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series A-1 and Series A-2 been converted into Common Stock immediately prior to such liquidation. The aggregate liquidation preference was \$5,479,997 at December 31, 2020.

Redemption Rights: SeqLL has the right to redeem any outstanding shares of preferred stock at a redemption price equal to the original issue price (\$0.32 per share for Series A-1 and \$1.68 per share for Series A-2) plus all accrued but unpaid dividends thereon.

Dividends: The dividend rate per share of Series A-1 is \$0.0256 per annum and \$0.1344 per annum for each share of Series A-2. Dividends of preferred stock are not cumulative. As of December 31, 2020, no dividends have been declared by the Company’s Board of Directors.

As of December 31, 2020 and 2019, the preferred stock was classified within stockholders’ equity (deficit). The Company does not adjust the carrying values of the convertible preferred stock to the liquidation preferences of such shares because the occurrence of any such change of control event was not deemed probable.

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 9 — Common Stock Warrants

The following table summarizes information with regard to outstanding warrants to purchase common stock as of December 31, 2020. The warrants are exercisable starting at their issuance dates. The warrants were accounted as equity based on the US GAAP guidance applicable to the instruments indexed to an entity's own stock.

Issuance Date	Number of Shares Issuable Upon Exercise of Outstanding Warrants	Exercise Price	Expiration Date
2/19/2016	9,652	\$ 3.10	2/18/2021
2/19/2016	9,652	\$ 3.10	2/18/2021
3/25/2016	2,895	\$ 3.10	3/24/2021
3/25/2016	1,447	\$ 3.10	3/24/2021
5/4/2017	3,860	\$ 3.10	5/3/2022
6/14/2017	1,351	\$ 3.10	6/13/2022
8/30/2018	3,088	\$ 3.10	8/29/2023
9/30/2018	60,506	\$ 3.10	9/29/2023
9/30/2018	486,486	\$ 2.16	9/29/2023
10/17/2018	1,157	\$ 3.10	10/16/2023
11/2/2018	964	\$ 3.10	11/1/2023
11/9/2018	964	\$ 3.10	11/8/2023
11/16/2018	964	\$ 3.10	11/15/2023
11/29/2018	964	\$ 3.10	11/28/2023
12/21/2018	964	\$ 3.10	12/20/2023
12/27/2018	964	\$ 3.10	12/26/2023
1/31/2019	1,930	\$ 3.10	1/30/2024
2/7/2019	1,640	\$ 3.10	2/6/2024
2/21/2019	1,640	\$ 3.10	2/20/2024
3/20/2019	3,378	\$ 3.10	3/18/2024
4/8/2019	1,930	\$ 3.10	4/6/2024
11/19/2020	53,333	\$ 4.10	11/19/2023
11/19/2020	8,533	\$ 4.10	11/19/2023
	658,262		

Note 10 — PPP Loan

On May 7, 2020, the Company applied for and received a loan for \$190,100 in connection with the Paycheck Protection Program ("PPP") pursuant to the CARES Act that was signed into law on March 27, 2020. The loan has a term of 10 years, is unsecured, and is guaranteed by the Small Business Administration. The loan bears interest at one percent per annum, with the first six months of interest and principal deferred. Some or all of the loan may be forgiven if at least 75% of the loan proceeds are used by the Company to cover payroll costs, including benefits, and if the Company maintains its employment and compensation within certain parameters during the period following the loan origination date and complies with other relevant conditions.

The Company elected to account for the PPP loan as an in-substance government grant by applying the guidance in IAS 20 by analogy based on the assessment that it is probable that it will meet both (a) the eligibility criteria for a PPP loan, and (b) the loan forgiveness criteria for all or substantially all of the PPP loan. Under this guidance, the Company recorded the loan proceeds in Other income in the consolidated statement of operations for the year ended December 31, 2020.

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 11 — Income Taxes

The Company is subject to United States federal and Massachusetts state income taxes at an approximate combined rate of 29% in 2020. During the years ended December 31, 2020 and 2019, there was no provision for income taxes as the Company incurred losses during both periods. Deferred tax assets and liabilities reflect the net tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The primary component of the Company's deferred tax assets are its net operating loss carryforwards. At December 31, 2020, the Company has a federal and state net operating loss carryforward of approximately \$10.5 million and \$10.5 million, respectively, which begins expiring in 2040. The Company's 2018 and after federal net operating losses can be carried forward indefinitely.

The valuation allowance against deferred tax assets was approximately \$3.1 million and \$2.9 million as of December 31, 2020 and 2019, respectively. During the years ended December 31, 2020 and 2019, the valuation allowance increased by approximately \$0.3 million and \$0.7 million, respectively.

As of December 31, 2020, the Company did not maintain any foreign subsidiaries and did not have previously deferred foreign earnings subject to the transition tax.

The income tax benefit differs from the amount of income tax determined by applying the U.S. federal income tax rate to pretax income for the years ended December 31, 2020 and 2019 due to the following:

	2020	2019
Computed "expected" tax benefit	(21.0)%	(34.0)%
Increase (decrease) in income taxes resulting from:		
State taxes, net of federal benefit	(8.0)%	(8.0)%
Permanent differences	0.0%	0.0%
Increase in valuation reserve	29.0%	42.0%
	<u>0.0%</u>	<u>0.0%</u>

Note 12 — Commitments and Contingencies

In November 2014, the Company entered an office space lease in Woburn, Massachusetts (the "Lease"), which is considered the Company's corporate headquarters, which was extended through November 30, 2020, and then subsequently further on a month-to-month basis until a notice by either of the parties. This lease was accounted as a short-term lease with the expense recognized on a straight-line basis over the lease term. The rent expense for this lease was \$180,732 and \$266,027 for the years ended December 31, 2020 and 2019, respectively.

On September 15, 2018, the Company executed an agreement to guarantee the obligations of John W. Kennedy, our Chief Financial Officer, on a lease for Mr. Kennedy's housing. The annual rental amount due on the lease is \$32,400 and was paid by Mr. Kennedy for each of the years ended December 31, 2020 and 2019. At December 31, 2020 the Company had no obligations either anticipated or currently payable under the guarantee.

Note 13 — Subsequent Events

During the first quarter of 2021, the Company issued senior secured convertible promissory notes to investors, for the total of \$250,000. The senior secured convertible promissory notes accrue interest at the rate of 10% per annum, are convertible into shares of common stock at a conversion price of \$3.75 per share and mature at the earlier of 24 months from issuance or the Company's next qualified equity offering of a minimum of \$7.5 million. In connection with issuance of the convertible promissory notes, the Company issued warrants to purchase 66,666 shares of common stock at the exercise price equal to \$4.10 per share and additional common stock purchase warrants as a placement fee equal to 8% of the total amount of potential new shares issued to investors.

SeqLL Inc.
Notes to Consolidated Financial Statements
Years Ended December 31, 2020 and 2019

Note 13 — Subsequent Events (cont.)

On February 3, 2021, the Company granted the St. Laurent Investments LLC and its Managing Partner William C. St. Laurent, together holders of \$3.3 million in Convertible and Non-Convertible Promissory Notes, an extension to be repaid on or before July 31, 2022.

On March 23, 2021, St. Laurent Investments, LLC agreed to convert their principal amount of \$1,691,730 in a combination of convertible notes and non-convertible notes issued between September 30, 2018 and April 8, 2019 into 521,896 shares of common stock of the Company at \$3.10 per share immediately prior to a closing of the Company's planned qualified financing.

SeqLL Inc.
Condensed Consolidated Balance Sheets

	March 31, 2021	December 31, 2020
<u>Assets</u>		
Current assets		
Cash and cash equivalents	\$ 9,099	\$ —
Accounts receivable, net	46,034	30,714
Other receivable	34,633	108,815
Inventory	198,504	203,011
Total current assets	288,270	342,540
Other assets		
Property and equipment, net	321,035	337,241
Other assets	14,262	14,262
Total assets	\$ 623,567	\$ 694,043
<u>Liabilities and Stockholders' Deficit</u>		
Current liabilities		
Accounts payable	\$ 936,525	\$ 861,840
Accrued expenses	207,832	123,639
Loan payable – related party	26,000	26,000
Total current liabilities	1,170,357	1,011,479
Non-current liabilities		
Non-convertible promissory notes	1,645,000	2,431,730
Convertible notes	2,141,730	1,105,000
Derivative liability for embedded conversion feature on convertible notes	934,257	—
Total non-current liabilities	4,720,987	3,536,730
Total liabilities	5,891,344	4,548,209
Commitments and contingencies (Note 12)		
Stockholders' equity (deficit)		
Preferred stock, \$0.00001 par value; 20,000,000 shares authorized; 5,791,665 shares issued and outstanding	58	58
Common stock, \$0.00001 par value; 80,000,000 shares authorized; 4,864,862 shares issued and outstanding	49	49
Additional paid-in capital	6,857,027	6,856,020
Accumulated deficit	(12,124,911)	(10,710,293)
Total stockholders' deficit	(5,267,777)	(3,854,166)
Total liabilities and stockholders' deficit	\$ 623,567	\$ 694,043

See accompanying notes to these condensed consolidated financial statements.

SeqLL Inc.
Condensed Consolidated Statement of Operations
(Unaudited)

	Three months ended March 31,	
	2021	2020
Revenue		
Sales	\$ 26,100	\$ 41,838
Grant revenue	34,633	36,975
Total revenue	<u>60,733</u>	<u>78,813</u>
Cost of sales	<u>27,951</u>	<u>83,820</u>
Gross profit (loss)	<u>32,782</u>	<u>(5,007)</u>
Operating expenses		
Research and development	17,955	240,057
General and administrative	387,387	236,026
Total operating expenses	<u>405,342</u>	<u>476,083</u>
Operating loss	(372,560)	(481,090)
Other (income) and expenses		
Other income	—	(1,016)
Loss on extinguishment of convertible notes	934,257	—
Interest expense	<u>107,801</u>	<u>66,797</u>
Net loss	<u>\$ (1,414,618)</u>	<u>\$ (546,871)</u>
Net loss per share – basic and diluted	<u>\$ (0.29)</u>	<u>\$ (0.11)</u>
Weighted average common shares – basic and diluted	<u>4,864,862</u>	<u>4,864,862</u>

See accompanying notes to these condensed consolidated financial statements.

SeqLL Inc.
Condensed Consolidated Statement of Changes in Stockholders' Deficit
For the Three Months Ended March 31, 2020 and 2021
(Unaudited)

	Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance as of December 31, 2020	5,791,665	\$ 58	4,864,862	\$ 49	\$ 6,856,020	\$ (10,710,293)	\$ (3,854,166)
Stock-based compensation expense	—	—	—	—	1,007	—	1,007
Net loss	—	—	—	—	—	(1,414,618)	(1,414,618)
Balance as of March 31, 2021	<u>5,791,665</u>	<u>\$ 58</u>	<u>4,864,862</u>	<u>\$ 49</u>	<u>\$ 6,857,027</u>	<u>\$ (12,124,911)</u>	<u>\$ (5,267,777)</u>
	Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance as of December 31, 2019	5,791,665	\$ 58	4,864,862	\$ 49	\$ 6,835,810	\$ (9,664,940)	\$ (2,829,023)
Stock-based compensation expense	—	—	—	—	6,891	—	6,891
Net loss	—	—	—	—	—	(546,871)	(546,871)
Balance as of March 31, 2020	<u>5,791,665</u>	<u>\$ 58</u>	<u>4,864,862</u>	<u>\$ 49</u>	<u>\$ 6,842,701</u>	<u>\$ (10,211,811)</u>	<u>\$ (3,369,003)</u>

See accompanying notes to these condensed consolidated financial statements.

SeqLL Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Three months ended March 31,	
	2021	2020
Cash Flows from Operating Activities		
Net loss	\$ (1,414,618)	\$ (546,871)
Adjustment to reconcile net loss to net cash used in operating activities:		
Depreciation	21,456	30,214
Loss on extinguishment of convertible notes	934,257	—
Stock-based compensation	1,007	6,891
Changes in operating assets and liabilities:		
Accounts receivable, net	(15,320)	(14,583)
Other receivables	74,182	63,699
Prepaid expenses	—	1,142
Inventory	4,507	81,178
Accounts payable	74,685	28,795
Accrued expenses	84,193	63,672
Deferred revenue	—	(25,000)
Net cash used in operating activities	<u>(235,651)</u>	<u>(310,863)</u>
Cash Flows from Investing Activities		
Purchase of lab equipment	(5,250)	—
Net cash used in investing activities	<u>(5,250)</u>	<u>—</u>
Cash Flows from Financing Activities		
Proceeds from issuance of non-convertible promissory notes	—	305,000
Proceeds from issuance of convertible notes	250,000	—
Net cash provided by financing activities	<u>250,000</u>	<u>305,000</u>
Net increase (decrease) in cash	9,099	(5,863)
Cash and cash equivalents, beginning of period	<u>—</u>	<u>5,863</u>
Cash and cash equivalents, end of period	<u>\$ 9,099</u>	<u>\$ —</u>

See accompanying notes to these condensed consolidated financial statements.

SeqLL Inc.
Notes to Condensed Consolidated Financial Statements
For the Three Months Ended March 31, 2021 and 2020
(Unaudited)

Note 1 — Nature of Operations and Basis of Presentation

SeqLL Inc. (the “Company” or “SeqLL”) was incorporated as a Delaware corporation on April 3, 2014. On April 8, 2014, SeqLL acquired a 100% ownership interest in SeqLL, LLC (“Subsidiary”), a domestic limited liability company formed on March 11, 2013 in the State of Massachusetts. SeqLL is a holding company of the Subsidiary and is a life sciences company focused on the development and application of innovative genetic analysis technologies and the monetization of that technology and related intellectual property. The Subsidiary purchased technology to enable the rapid analysis of large volumes of genetic material by directly sequencing single molecules of DNA or RNA. The Subsidiary’s principal office is located in Woburn, Massachusetts.

Risks and Uncertainties

The Company is subject to a number of risks similar to other companies in its industries, including rapid technological change, competition from larger pharmaceutical and biotechnology companies and dependence on key personnel.

The extent of the impact of the COVID-19 pandemic on the Company’s business continues to be highly uncertain and difficult to predict, as the responses that the Company, other businesses and governments are taking continue to evolve. Furthermore, capital markets and economies worldwide have also been negatively impacted by the COVID-19 pandemic, and it is possible that it could cause a lasting national and/or global economic recession. Policymakers around the globe have responded with fiscal policy actions to support the healthcare industry and economy as a whole. The magnitude and overall effectiveness of these actions remain uncertain.

The severity of the impact of the COVID-19 pandemic on the Company’s business will depend on a number of factors, including, but not limited to, the duration and severity of the pandemic and the extent and severity of the impact on the Company’s service providers, suppliers, contract research organizations and the Company’s clinical trials, all of which are uncertain and cannot be predicted. During the past year, the COVID-19 pandemic has adversely affected our sales and results of operations and may continue to adversely affect our business. The extent to which the COVID-19 pandemic may in the future materially impact the Company’s financial condition, liquidity or results of operations is uncertain.

Going Concern

From its inception through March 31, 2021, the Company has devoted substantially all of its efforts to business planning and research and development. The Company has a limited operating history and the sales and income potential of the Company’s business and market are unproven. Successful transition to attaining profitable operations is dependent upon achieving a level of revenues adequate to support the Company’s cost structure. The Company has experienced net losses and negative cash flows from operating activities since its inception, and had an accumulated deficit of \$11.2 million as of March 31, 2021. These conditions among others, raise substantial doubt about the Company’s ability to continue as a going concern.

The Company’s ability to continue to operate as a going concern is dependent upon raising additional funds to finance its activities. The Company is in the process of filing an S-1 registration statement with the Securities and Exchange Commission (“SEC”) to raise up to \$12 million. However, there can be no assurances the SEC will approve the Company’s registration statement or, if approved, the Company will successfully complete an IPO. In the event the Company does not complete the IPO or secure other outside financing, it is anticipated by the Board of Directors and management that the Company’s primary investor would continue to fund the operating deficits as they have since the Company’s founding in 2013. However, there can be no assurances that the primary investor would continue to fund the Company’s operating deficits for the long-term.

The unaudited condensed consolidated financial statements do not include any adjustments with respect to the carrying amounts of assets and liabilities and their classification that might be necessary should the Company be unable to continue as a going concern.

SeqLL Inc.
Notes to Condensed Consolidated Financial Statements
For the Three Months Ended March 31, 2021 and 2020
(Unaudited)

Note 1 — Nature of Operations and Basis of Presentation (cont.)

The Company’s management and Board of Directors anticipate that the Company’s current financial resources along with the anticipated equity and debt financings to be raised in 2021 are sufficient to satisfy its operating requirements through December 31, 2021.

Basis of Presentation

The unaudited condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, SeqLL, LLC. All intercompany accounts and transactions have been eliminated in consolidation.

Unaudited Interim Financial Information

The accompanying unaudited condensed consolidated financial statements of the Company have been prepared on the same basis as the audited financial statements and include all adjustments, which include only normal recurring adjustments, necessary for the fair presentation of the Company’s financial position as of March 31, 2021 and its results of operations and cash flows for the three months ended March 31, 2021 and 2020 in accordance with U.S. GAAP. The results for the three months ended March 31, 2021 are not necessarily indicative of the results that may be expected for the full fiscal year ending December 31, 2021 or any other interim period with this fiscal year. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in this Amendment No.1 to Registration Statement (No. 333-254886) on Form S-1.

Note 2 — Significant Accounting Policies

During the three months ended March 31, 2021, there were no changes to the significant accounting policies as described in the 2020 Financial Statements.

Use of Estimates

The preparation of the financial statements in conformity with U.S. GAAP, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Significant estimates include, but are not limited to stock-based compensation expense, research and development accruals, fair value of common stock and loss on extinguishment of notes. Actual results could differ from those estimates and changes in estimates may occur.

Inventory

Inventory consists of finished goods, work-in-process and raw materials and is valued at the lower of cost or net realizable value, determined by the first-in, first-out (“FIFO”) method. As the Company manufactures the finished goods and work-in-process materials, overhead costs are included in inventory. The Company evaluates the carrying cost of finished goods, work-in-process and raw materials items. To the extent that such costs exceed future demand estimates and/or exhibit historical turnover at rates less than current inventory levels, the Company reduces the carrying value of the applicable inventories. Inventory consisted of the following:

	March 31, 2021	December 31, 2020
Raw materials	\$ 58,659	\$ 59,416
Work in process	139,845	143,595
Total inventory	<u>\$ 198,504</u>	<u>\$ 203,011</u>

SeqLL Inc.
Notes to Condensed Consolidated Financial Statements
For the Three Months Ended March 31, 2021 and 2020
(Unaudited)

Note 2 — Significant Accounting Policies (cont.)

Revenue Recognition

The Company's revenue is generated primarily from the sale of products and research services. Product revenue primarily consists of sales of genetic sequencing equipment and sequencing reagent kits. Research service revenue primarily consists of revenue generated from gene sequencing services and grants.

The Company recognizes revenue in accordance with Accounting Standards Codification ("ASC") Topic 606, Revenue from Contracts with Customers ("ASC 606"). Under ASC 606, the Company recognizes revenue when control of its products and services is transferred to its customers in an amount that reflects the consideration the Company expects to receive from its customers in exchange for those products and services. To determine the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of ASC 606, the Company performs a five-step process. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when (or as) the performance obligations have been satisfied. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. The Company only applies the five-step process to contracts when it is probable that the entity will collect consideration it expects to be entitled to in exchange for the goods or services it transfers to the customer.

The Company evaluates contingent payments to estimate the amount which is not probable of a material reversal to include in the transaction price using the most likely amount method. Future payments that are not within the Company's control and are not considered probable of being achieved until the contingencies are resolved.

Revenue from product sales, including customized sequencing instruments and sequencing reagent kits and off-the-shelf consumables, is recognized generally upon delivery, which is when control of the product is deemed to be transferred.

Revenue from gene sequencing services, using the tSMS platform, is recognized generally as the services are provided to the customer. The components of the sequencing process, including reagent kits and off-the-shelf consumables, sample loader and sequencer, are not distinct within the context of the gene sequencing service contract. This is because in a gene sequencing service contract the reagent kits and other components, such as off-the-shelf consumables, used in the sequencing process, become required inputs to achieve the specified gene sequencing analysis, and the components in the sequencing process are sequential in nature and highly-interrelated as they work together to generate sample-specific data.

The Company has elected to exclude sales tax from revenue. The Company generally has no obligations for returns, refunds and other similar obligations and does not provide separate equipment warranties. The Company recognized \$10,500 and \$41,838 in revenue from gene sequencing services for the three-month periods ended March 31, 2021 and 2020, respectively. The Company recognized \$15,600, and \$0 in revenue from product sales for the three-month periods ended March 31, 2021 and 2020, respectively.

Grant Revenue

The Company's grant revenues are derived from research programs by various departments of the National Institute of Health (NIH Grants).

Grants awarded to the Company for research and development by government entities are outside the scope of ASC 606 guidance. This is because these granting entities are not considered to be customers and are not receiving reciprocal value for their grant support provided to the Company. These grants provide the Company with payments for certain types of expenditures in return for research and development activities over a contractually defined period.

SeqLL Inc.
Notes to Condensed Consolidated Financial Statements
For the Three Months Ended March 31, 2021 and 2020
(Unaudited)

Note 2 — Significant Accounting Policies (cont.)

The Company recognizes NIH Grants revenue as reimbursable grant costs are incurred up to pre-approved award limits within the budget period. The costs associated with these reimbursements are reflected as a component of research and development expense in the accompanying consolidated statements of operations. In the three months ended March 31, 2021 and 2020, the Company earned grant revenue of \$34,633 and \$36,975, respectively.

Research and Development Expenses

The Company expenses all research and development costs as incurred. Included in research and development costs are wages, stock-based compensation and benefits of employees and other operational costs related to the Company's research and development activities, including facility-related expenses and external costs of outside contractors engaged by the Company.

Segments

The Company operates in a single business segment that includes the design, development and manufacturing of genetic analysis technologies.

Net Loss per Share

Basic net loss per share is computed by dividing the net loss by the weighted-average number of shares of common stock outstanding for the period, without consideration for potentially dilutive securities if their effect is antidilutive. Diluted net loss per share is computed by dividing the net loss by the weighted average number of shares of common stock and dilutive common stock equivalents outstanding for the period determined using the treasury stock and if-converted methods. Dilutive common stock equivalents are comprised of convertible preferred stock, convertible promissory notes, options outstanding under the Company's stock option plan and warrants. For all periods presented, there is no difference in the number of shares used to calculate basic and diluted shares outstanding as inclusion of the potentially dilutive securities would be antidilutive.

The following potential common shares were not considered in the computation of diluted net loss per share as their effect would have been antidilutive:

	March 31,	
	2021	2020
Convertible preferred stock	5,791,665	5,791,665
Convertible promissory notes	641,895	408,291
Stock options	818,915	822,420
Warrants for common stock	711,946	596,396

There have been no recently issued accounting pronouncements that have had or are expected to have a material impact on the Company's condensed consolidated financial statements.

SeqLL Inc.
Notes to Condensed Consolidated Financial Statements
For the Three Months Ended March 31, 2021 and 2020
(Unaudited)

Note 3 — Accrued Expenses

Accrued expenses consist of the following:

	March 31, 2021	December 31, 2020
Accrued interest	207,832	100,031
Other	—	23,608
	<u>\$ 207,832</u>	<u>\$ 123,639</u>

Note 4 — Stock Option Plan

The Company’s 2014 Equity Incentive Plan (the Plan) permits the grant of options for its common stock and shares of common stock to its employees and certain non-employees for up to 1,081,081 shares.

As of March 31, 2021, there were 262,166 shares available for future issuance under the 2014 Plan. Generally, option awards are granted with an exercise price equal to the fair value of the Company’s stock at the date of grant and vest over a period of four years. No option may have a term in excess of ten years from the option grant date. Share awards generally vest over a period of four years. Certain option and share awards provide for accelerated vesting if there is a change in control (as defined by the 2014 Plan). No option awards were granted during for the three months ended March 31, 2021.

The stock option activity for the three months ended March 31, 2021 is as follows:

	Number of Options	Weighted- Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in Years)
Outstanding as of December 31, 2020	818,915	1.77	6.52
Granted	—	—	—
Exercised	—	—	—
Cancelled/Forfeited	—	—	—
Outstanding and expected to vest as of March 31, 2021 (unaudited)	<u>818,915</u>	<u>1.77</u>	<u>6.27</u>
Exercisable at March 31, 2021 (unaudited)	<u>668,754</u>	<u>\$ 1.62</u>	<u>6.01</u>

During the three months ended March 31, 2021 and 2020, the Company recorded \$1,007 and \$6,891 of stock-based compensation associated with vesting of stock options, respectively. As of March 31, 2021, there was approximately \$275,000 of unrecognized compensation expense related to unvested share-based compensation awards, which will be recognized over a weighted average period of approximately one year.

Note 5 — Related Party Transactions

As of March 31, 2021 and December 31, 2020, the outstanding amount due to Daniel Jones, our Chief Executive Officer, was \$26,000 relating to a series of non-interest-bearing demand loans to us.. No repayments were made during the three months ended March 31, 2021. We expect to repay these loans in full with a portion of the net proceeds of this offering.

SeqLL Inc.
Notes to Condensed Consolidated Financial Statements
For the Three Months Ended March 31, 2021 and 2020
(Unaudited)

Note 5 — Related Party Transactions (cont.)

At March 31, 2021 and December 31, 2020, the Company had the following outstanding payables to its preferred shareholders for past services:

	March 31, 2021	December 31, 2020
Floral Finance	\$ 9,849	\$ 9,849
Genomic Diagnostic Technologies	16,675	16,675
St. Laurent Institute	113,954	113,954
St. Laurent Realty, Inc.	27,913	27,913
Stonemill Center	16,627	16,627
William St. Laurent	15,415	15,415
Total related party payables	<u>\$ 200,433</u>	<u>\$ 200,433</u>

William C. St. Laurent, a member of the Company's board of directors, relatives of Mr. St. Laurent and entities controlled by the St. Laurent family are controlling shareholders of the Company. These entities are all St. Laurent family-owned entities and are therefore related parties: Genomic Diagnostic Technologies assisted SeqLL by providing corporate accounting support and preparation of its audited financial statements of 2018 and 2017; St. Laurent Institute, a 501C-3 company, has a bioinformatics team that does work for SeqLL when it needs bioinformatics specialist support in providing certain sequencing services; St. Realty, Inc. assisted SeqLL by providing corporate accounting support and preparation of its audited financial statements of 2018 and 2017 before Genomic Diagnostic Technologies took over this role; and Stonemill Center assisted SeqLL by paying for certain out of pocket expenses incurred by William C. St. Laurent in his former role as Chairman of the Board for SeqLL; and William C. St. Laurent as the former Chairman of the Board accrued a certain Director's compensation that has not been paid by SeqLL.

The Company issued the convertible notes and promissory notes to the related parties (see Note 7).

Note 6 — Notes Payable

During the three months ended March 31, 2021, the Company issued senior secured convertible promissory notes to investors, for the total of \$250,000. The senior secured convertible promissory notes accrue interest at 10% per annum, are repaid at the earlier of 24 months from issuance or the Company's next qualified equity offering of a minimum of \$7.5 million, or convertible at \$3.75 per share. In connection with these convertible promissory notes, the Company issued warrants to purchase the number of common shares equal to 100% of the total amount of shares related to the noteholders upon conversion of these convertible promissory notes at the exercise price equal to \$4.10 per share and additional common stock purchase warrants as a placement fee equal to 8% of the total amount of potential new shares issued to investors.

In connection with the Convertible Notes issued during the three months ended March 31, 2021, the Company issued warrants to noteholders to purchase the total of 77,330 shares of the Company's common stock, including 800 to the placement agent (see Note 8). The grant-date fair values of these warrants were immaterial.

On February 3, 2021, the preferred stockholder and the holder of \$2,910,710 in the Convertible Notes and Promissory Notes of the Company granted the Company an extension on all their notes to be repaid on or before July 31, 2022. This amendment was accounted for on a prospective basis under the troubled debt restructuring guidance.

During March 2021, the Company entered into a series of agreements with the noteholders to automatically convert \$786,730 in outstanding Promissory Notes and \$1,305,000 in Convertible Notes (Amended Notes), to common stock upon the closing of an IPO ("Conversion Agreements"), of which \$1,552,683 is held by St. Laurent Investments, LLC and its affiliates. Under the terms of the Conversion Agreements, \$826,020 and \$1,265,710 in Amended Notes are to be converted based on the \$3.75 and \$3.10 conversion prices, respectively. Since the

SeqLL Inc.
Notes to Condensed Consolidated Financial Statements
For the Three Months Ended March 31, 2021 and 2020
(Unaudited)

Note 6 — Notes Payable (cont.)

automatic conversion may result in a material benefit to the noteholders, this amendment was deemed substantive and was accounted for as an extinguishment of debt. Accordingly, the Company recognized a loss on extinguishment of debt totaling \$934,257 in the statement of operations for the three month period ended March 31, 2021, which represents the excess of the fair value of the Amended Notes totaling \$3,118,235 over their carrying value of \$2,183,978. The fair value of the Amended Notes was estimated using probability weighted expected payouts under various settlement scenarios, discounted to their present value based on the 28.8% estimated effective rate of return.

For the three months ended March 31, 2021 and 2020, interest expense was \$107,801 and \$66,797, respectively.

Note 7 — Preferred Stock

The preferred stock detail as of March 31, 2021 and December 31, 2020 was as follows:

	Shares authorized	Shares issued	Issuance price per share
Series A-1 Convertible Preferred Stock		3,125,000	\$ 0.32
Series A-2 Convertible Preferred Stock		2,666,665	\$ 1.68
Series A Preferred stock	20,000,000	5,791,665	

The rights and preferences at December 31, 2020 of the Series A-1 Preferred Stock (“Series A-1”) and Series A-2 Preferred Stock (“Series A-2”) collectively the “Preferred Stock”, are as follows:

Voting rights: Series A-1 and Series A-2 preferred stockholders are entitled to vote together with all other classes and series of stock and have the right to receive notice of any stockholder’s meetings. Each preferred stock is entitled to the number of votes equal to the number of shares of common stock into which each share of the applicable preferred stock is convertible at the time of such vote.

Conversion Rights: The Preferred Stock may be converted at any time at the election of the holder into Common Stock at an initial conversion price determined by dividing the Series A-1 Original Issue Price of \$0.32 by the Series A-1 Conversion Price of \$0.59; and the Series A-2 Original Issue Price of \$1.68 by the Series A-2 Conversion Price of \$3.10; both are subject to adjustment for stock splits, stock combinations and the like, and to a weighted-average adjustment for future issuances of Common Stock, warrants or rights to purchase Common Stock or securities convertible into Common Stock for a consideration per share that is less than the then-applicable conversion price, subject to certain exceptions listed in the Charter.

The Preferred Stock is subject to automatic conversion upon (i) the closing of an initial public offering of the Common Stock at a price per share equal to at least \$9.25 (as adjusted for any stock splits, stock dividends, combinations, subdivisions, recapitalization or the like) in an underwritten public offering in which the Company raises gross proceeds of at least \$10 million or (ii) the consent of holders of at least a majority of the then-outstanding shares of Preferred Stock voting together as a single class.

Liquidation Preferences: In the event of any voluntary or involuntary liquidation, deemed liquidation event, dissolution or winding up of the Company, as defined, the holders of the preferred stock are entitled to be paid out of the assets of the Company before any payments are to be made to any other shareholders. The liquidation price to be paid is the greater of the original issue price for Series A-1 (\$0.32 per share) and Series A-2 (\$1.68 per share), plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series A-1 and Series A-2 been converted into Common Stock immediately prior to such liquidation. The aggregate liquidation preference was \$5,479,997 at March 31, 2021.

SeqLL Inc.
Notes to Condensed Consolidated Financial Statements
For the Three Months Ended March 31, 2021 and 2020
(Unaudited)

Note 7 — Preferred Stock (cont.)

Redemption Rights: SeqLL has the right to redeem any outstanding shares of preferred stock at a redemption price equal to the original issue price (\$0.32 per share for Series A-1 and \$1.68 per share for Series A-2) plus all accrued but unpaid dividends thereon.

Dividends: The annual dividend rate per share of Series A-1 and Series A-2 is \$0.0256 and \$0.1344, respectively. Dividends of preferred stock are not cumulative. No dividends have been declared to date by the Company's Board of Directors.

Note 8 — Common Stock Warrants

The following table summarizes information with regard to outstanding warrants to purchase common stock as of March 31, 2021. On March 16, 2021 the Company made a down payment to ShareIntel-Shareholder Intelligence Services, LLC for anticipated services connected to the Company's planned offering, which was in the form of issuing 9,865 warrants to purchase common stock at \$4.10 per share, with an expiration date of June 30, 2024. The warrants are exercisable starting at their issuance dates. As of March 31, 2021, the weighted average exercise price of warrants outstanding as of March 31, 2021 is \$2.65 per share. The warrants were accounted as equity based on the US GAAP guidance applicable to the instruments indexed to an entity's own stock.

Issuance Date	Number of Shares Issuable Upon Exercise of Outstanding Warrants	Exercise Price	Expiration Date
5/4/2017	3,860	\$ 3.10	5/3/2022
6/14/2017	1,351	\$ 3.10	6/13/2022
8/30/2018	3,088	\$ 3.10	8/29/2023
9/30/2018	60,506	\$ 3.10	9/29/2023
9/30/2018	486,486	\$ 2.16	9/29/2023
10/17/2018	1,157	\$ 3.10	10/16/2023
11/2/2018	964	\$ 3.10	11/1/2023
11/9/2018	964	\$ 3.10	11/8/2023
11/16/2018	964	\$ 3.10	11/15/2023
11/29/2018	964	\$ 3.10	11/28/2023
12/21/2018	964	\$ 3.10	12/20/2023
12/27/2018	964	\$ 3.10	12/26/2023
1/31/2019	1,930	\$ 3.10	1/30/2024
2/7/2019	1,640	\$ 3.10	2/6/2024
2/21/2019	1,640	\$ 3.10	2/20/2024
3/20/2019	3,378	\$ 3.10	3/18/2024
4/8/2019	1,930	\$ 3.10	4/6/2024
11/19/2020	53,333	\$ 4.10	11/19/2023
11/19/2020	8,533	\$ 4.10	11/19/2023
1/8/2021	13,333	\$ 4.10	6/30/2024
1/11/2021	26,666	\$ 4.10	6/30/2024
2/13/2021	13,333	\$ 4.10	6/30/2024
3/16/2021	10,665	\$ 4.10	6/30/2024
3/16/2021	13,333	\$ 4.10	6/30/2024
	711,946		

SeqLL Inc.
Notes to Condensed Consolidated Financial Statements
For the Three Months Ended March 31, 2021 and 2020
(Unaudited)

Note 9 — Commitments and Contingencies

In November 2014, the Company entered an office space lease in Woburn, Massachusetts (the “Lease”), which is considered the Company’s corporate headquarters, which was extended through November 30, 2020, and then subsequently further on a month-to-month basis until a notice by either of the parties. This lease was accounted as a short-term lease with the expense recognized on a straight-line basis over the lease term. The rent expense for this lease was \$41,837 and \$52,839 for the three months ended March 31, 2021 and 2020.

Note 10 — Subsequent Events

On April 29, 2021, the Company entered into an agreement with a noteholder to automatically convert an additional \$50,000 in outstanding Convertible Notes, including any accrued interest, to common stock upon the closing of an IPO at the conversion price of \$3.75 per share.

On May 5, 2021, the Company received an additional \$190,100 in connection with the Paycheck Protection Program (“PPP”) pursuant to the CARES Act that was signed into law on March 27, 2020. The loan has a fixed interest rate of 1.0%.

**2,315,789 Units,
each Unit consisting of one share of common stock
and one warrant to purchase one share of common stock**



PRELIMINARY PROSPECTUS

, 2021

Sole Book-Running Manager

Maxim Group LLC

Through and including _____, 2021 (90 days after the date of this prospectus), all dealers that buy, sell or trade shares of our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the Securities and Exchange Commission registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and the Nasdaq Capital Market listing fee.

	Amount to be Paid
SEC registration fee	\$ 2,837
FINRA filing fee	4,045
The Nasdaq Capital Market initial listing fee	45,000
Printing and engraving expenses	18,000
Accounting fees and expenses	200,000
Legal fees and expenses	325,000
Transfer agent and registrar fees	5,000
Miscellaneous fees and expenses	10,118
Total	\$ 610,000

Item 14. Indemnification of Directors and Officers.

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except for breaches of the director's duty of loyalty to the corporation or its stockholders, acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of a law, authorizations of the payments of a dividend or approval of a stock repurchase or redemption in violation of Delaware corporate law or for any transactions from which the director derived an improper personal benefit. Our certificate of incorporation will provide that no director will be liable to us or our stockholders for monetary damages for breach of fiduciary duties as a director, subject to the same exceptions as described above. We also expect to maintain standard insurance policies that provide coverage (1) to our directors and officers against loss arising from claims made by reason of breach of duty or other wrongful act and (2) to us with respect to indemnification payments we may make to such officers and directors.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with a threatened, pending, or completed action, suit or proceeding to which he or she is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, indemnification is limited to expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with defense or settlement of such action or suit and no indemnification shall be made with respect to any claim, issue, or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper. In addition, to the extent that a present or former director or officer of a corporation has been successful on the merits or otherwise in defense of any action, suit, or proceeding described above (or claim, issue, or matter therein), such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith. Expenses (including attorneys' fees) incurred by an officer or director in defending any civil, criminal, administrative, or investigative action, suit, or proceeding may be advanced by the corporation upon receipt of an undertaking by such person to repay such amount if it is ultimately determined that such person

is not entitled to indemnification by the corporation under Section 145 of the General Corporation Law of the State of Delaware. Our amended and restated certificate of incorporation will provide that we will, to the fullest extent permitted by law, indemnify any person made or threatened to be made a party to an action or proceeding by reason of the fact that he or she (or his or her testators or intestate) is or was our director or officer or serves or served at any other corporation, partnership, joint venture, trust or other enterprise in a similar capacity or as an employee or agent at our request, including service with respect to employee benefit plans maintained or sponsored by us, against expenses (including attorneys'), judgments, fines, penalties and amounts paid in settlement incurred in connection with the investigation, preparation to defend, or defense of such action, suit, proceeding, or claim. However, we are not required to indemnify or advance expenses in connection with any action, suit, proceeding, claim, or counterclaim initiated by us or on behalf of us. Our amended and restated bylaws will provide that we will indemnify and hold harmless each person who was or is a party or threatened to be made a party to any action, suit, or proceeding by reason of the fact that he or she is or was our director or officer, or is or was serving at our request in a similar capacity of another corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans (whether the basis of such action, suit, or proceeding is an action in an official capacity as a director or officer or in any other capacity while serving as a director or officer) to the fullest extent authorized by the Delaware General Corporation Law against all expense, liability and loss (including attorney's fees, judgments, fines, ERISA excise taxes, or penalties and amounts paid in settlement) reasonably incurred or suffered by such person in connection with such action, suit or proceeding, and this indemnification continues after such person has ceased to be an officer or director and inures to the benefit of such person's heirs, executors and administrators. The indemnification rights also include the right generally to be advanced expenses, subject to any undertaking required under Delaware General Corporation Law, and the right generally to recover expenses to enforce an indemnification claim or to defend specified suits with respect to advances of indemnification expenses.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding securities sold and issued by us since March 1, 2018 that were not registered under the Securities Act, as well as the consideration received by us for such securities and information relating to the section of the Securities Act, or rule of the Securities and Exchange Commission, under which exemption from registration was claimed.

- (1) On and prior to September 5, 2018, we sold to an accredited investor for an aggregate purchase price of \$3,314,315 a series of convertible promissory notes in the aggregate principal amount of \$3,314,315 and accruing interest at 10% per annum. On September 30, 2018, we entered into an Exchange Agreement with such accredited investor to exchange such promissory notes for (i) 1,866,071 shares of our Series A-2 Preferred Stock; (ii) warrants to purchase an aggregate of 60,521 shares of common stock; (iii) warrants to purchase an aggregate of 486,486 shares of common stock and (iv) a new promissory note in the principal amount of \$360,710.
- (2) Option Agreements dated April 15, 2019 with certain employees and consultants to purchase an aggregate of 32,431 shares of common stock pursuant to the 2014 Plan.
- (3) During the fourth quarter of 2018, we entered into a series of convertible promissory notes with an accredited investor amounting to \$360,000. These convertible promissory notes accrue interest at 10% per annum and are convertible at the lower of \$3.10 per share or a 20% discount to the share price paid by the purchasers of equity securities in our next equity financing. In connection with these convertible promissory notes, we issued warrants to purchase 6,941 shares of common stock at an exercise price equal to the lower of \$3.10 per share or a 20% discount to the share price paid by the purchasers of equity securities in our next equity financing.
- (4) Through September 19, 2019, we have entered into a series of convertible promissory notes with an accredited investor amounting to \$545,000. These convertible promissory notes accrue interest at 10% per annum and are convertible at the lower of \$3.10 per share or a 20% discount to the share price paid by the purchasers of equity securities in our next equity financing. In connection with these convertible promissory notes, we issued warrants to purchase the number of shares of common stock equal to 6% of

the total amount of shares related to the conversion of these convertible promissory notes at the exercise price equal to the lower of \$3.10 per share or a 20% discount to the share price paid by the purchasers of equity securities in our next equity financing.

- (5) During the first quarter of 2021, we sold to four accredited investors for an aggregate purchase price of \$250,000 (i) senior secured convertible promissory notes that bear interest at the rate of 10% per annum, (ii) convertible at a conversion price of \$3.75 per share, subject to adjustment, (iii) mature at the earlier of June 30, 2021 or the date of closing of a equity offering in which we receive gross proceeds of at least \$7.5 million, and (iv) warrants to purchase an aggregate of 66,666 shares of common stock at an exercise price equal to \$4.10 per share. In connection with such sales, we issued an additional common stock purchase warrants as a placement fee to purchase an aggregate of 19,198 shares of common stock.

The offers, sales and issuances of securities listed above, were deemed exempt from registration under Section 4(a)(2) of the Securities Act or Regulation D promulgated thereunder in that the issuance of securities did not involve a public offering. The recipients of such securities in each of these transactions represented their intention to acquire the securities for investment purposes only and not with a view to or for sale in connection with any distribution thereof. The offers, sales and issuances of securities listed above, were deemed exempt from registration in reliance on Section 4(a)(2) of the Securities Act or Rule 701 promulgated thereunder as transactions pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of such securities were our employees, directors or bona fide consultants and received the securities under our equity incentive plans. All of the foregoing securities are deemed restricted securities for purposes of the Securities Act and appropriate legends were affixed to the securities issued in such transactions.

Item 16. Exhibits and Financial Statement Schedules.

- (a) *Exhibits.*

The exhibits to the registration statement are listed in the Exhibit Index attached hereto and are incorporated by reference herein.

- (b) *Financial Statement Schedules.*

All other schedules are omitted because they are not required, are not applicable, or the information is included in the financial statements or the related notes to financial statements thereto.

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, or the Securities Act, may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered

(if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities: the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

Table of Contents

- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (6) Provide to the underwriter at the closing specified in the underwriting agreements certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.
- (7) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- (8) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

EXHIBIT INDEX

In reviewing the agreements included as exhibits to this registration statement, please remember they are included to provide you with information regarding their terms and are not intended to provide any other factual or disclosure information about us, our subsidiaries or other parties to the agreements. The agreements contain representations and warranties by each of the parties to the applicable agreement. These representations and warranties have been made solely for the benefit of the other parties to the applicable agreement and:

- should not in all instances be treated as categorical statements of fact, but rather as a way of allocating the risk to one of the parties if those statements prove to be inaccurate;
- have been qualified by disclosures that were made to the other party in connection with the negotiation of the applicable agreement, which disclosures are not necessarily reflected in the agreement;
- may apply standards of materiality in a way that is different from what may be viewed as material to you or other investors; and
- were made only as of the date of the applicable agreement or such other date or dates as may be specified in the agreement and are subject to more recent developments.

Accordingly, these representations and warranties may not describe the actual state of affairs as of the date they were made or at any other time. We acknowledge that, notwithstanding the inclusion of the foregoing cautionary statements, we are responsible for considering whether additional specific disclosures of material information regarding material contractual provisions are required to make the statements in this registration statement not misleading. Additional information about us may be found elsewhere in the prospectus included in this registration statement.

Exhibit Number	Description of Exhibits	Incorporation by Reference		
		Form	Filing Date	Exhibit Number
1.1	Form of Underwriting Agreement	S-1/A	5/28/21	1.1
3.1	Amended and Restated Certificate of Incorporation, as currently in effect	S-1	4/23/19	3.1
3.2	Bylaws, as currently in effect	S-1	4/23/19	3.2
3.3	Form of Amended and Restated Certificate of Incorporation to be in effect upon the completion of this offering	S-1	3/31/21	3.3
3.4	Form of Amended and Restated Bylaws, to be in effect upon the completion of this offering	S-1	4/23/19	3.4
4.1	Specimen common stock certificate	S-1/A	5/22/19	4.1
4.2	Form of Representative's Warrant	S-1/A	5/28/21	4.2
4.3	Form of Convertible Note	S-1	4/23/19	4.3
4.4	Form of Outstanding Warrant	S-1	4/23/19	4.4
4.5	Form of Warrant Agency Agreement between SeqLL Inc. and VSTOCK Transfer LLC	S-1/A	5/28/21	4.5
4.6	Form of Common Stock Purchase Warrant	S-1/A	5/28/21	4.6
5.1	Opinion of Pryor Cashman LLP	—	**	—
10.1#	Amended and Restated 2014 Equity Incentive Plan	S-1	3/31/21	10.1
10.2	License Agreement dated March 15, 2013 between SeqLL, LLC and Helicos Biosciences Corporation	S-1	4/23/19	10.2
10.3	Sub-License Agreement dated March 15, 2013 between SeqLL, LLC and Helicos Biosciences Corporation	S-1	4/23/19	10.3
10.4	Amended and Restated Investors Rights Agreement dated as of February 19, 2016	S-1	4/23/19	10.4
10.5	Commercial Lease dated November 25, 2014 by and between SeqLL, LLC, JAM Cambridge Ventures, LLC and RAM Cambridge Venture LLC	S-1	4/23/19	10.5

[Table of Contents](#)

Exhibit Number	Description of Exhibits	Incorporation by Reference		
		Form	Filing Date	Exhibit Number
10.6	First Amendment to the Lease Agreement dated April 1, 2016, by and between SeqLL, LLC, JAM Cambridge Ventures, LLC and RAM Cambridge Venture LLC	S-1	4/23/19	10.6
10.7	Amended and Restated Right of First Refusal and Co-Sale Agreement	S-1	4/23/19	10.7
10.8	Exchange Agreement dated September 30, 2018 by and between SeqLL Inc. and St. Laurent Investments, LLC	S-1	4/23/19	10.8
10.9	Form of Stock Option Award	S-1	4/23/19	10.9
10.10	Series A-1 Preferred Stock Purchase Agreement	S-1	4/23/19	10.10
10.11	Series A-2 Preferred Stock Purchase Agreement	S-1	4/23/19	10.11
10.12	First Amendment to Series A-2 Preferred Stock Purchase Agreement	S-1	4/23/19	10.12
10.13	Investor Rights Agreement dated as of September 30, 2018	S-1/A	5/28/21	10.13
21.1	Subsidiaries of the Registrant	S-1	4/23/19	21.1
23.1	Consent of Wolf & Company, P.C., independent registered public accounting firm	—	*	—
23.2	Consent of Pryor Cashman LLP (included in Exhibit 5.1)	—	**	—
24.1	Power of Attorney (included on signature page to this registration statement)			
99.1	Consent to be Named as Director Nominee	S-1	3/31/21	99.1

* Filed herewith.

** To be filed by amendment.

Indicates a management contract or compensatory plan.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Woburn, State of Massachusetts, on this 25th day of June 2021.

SEQLL INC.

By: /s/ Daniel Jones

Daniel Jones
Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Daniel Jones</u> Daniel Jones	Chief Executive Officer and Chairman <i>(Principal Executive Officer)</i>	June 25, 2021
<u>/s/ John W. Kennedy</u> John W. Kennedy	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	June 25, 2021
<u>/s/ *</u> Douglas Miscoll	Director	June 25, 2021
<u>/s/ *</u> David Pfeffer	Director	June 25, 2021

*By /s/ Daniel Jones

Daniel Jones
Attorney-in-fact

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use in this Amendment No. 2 to the Registration Statement (No. 333-254886) on Form S-1 of SeqLL Inc. of our report dated March 30, 2021, relating to the consolidated financial statements of SeqLL Inc., appearing in the Prospectus, which is part of this Registration Statement.

We also consent to the reference to our Firm under the caption "Experts" in such Prospectus.

/s/ Wolf & Company, P.C.

Wolf & Company, P.C.
Boston, Massachusetts
June 25, 2021