As confidentially submitted to the Securities and Exchange Commission on November 16, 2018 pursuant to the Jumpstart Our Business Startups Act of 2012.

Registration No. 333-

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

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)

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

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, 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	☐ (Do not check if a smaller reporting company)	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(2)	Amount of Registration Fee
Common Stock, $0.00001 par value per share(1)	$ [•]	$ [•]
Underwriters' Warrants(3)(4)	—	—
Shares of Common Stock underlying Underwriters' Warrants	$ [•]	$ [•]
Total:	$10,000,000	$1,212

(1) Includes [•] shares that the underwriters have the option to purchase to cover over-allotments, if any.
(2) Estimated solely for purposes of calculating the registration fee in accordance with Rule 457(a) under the Securities Act of 1933, as amended, or the Securities Act.
(3) Registers warrants to be granted to the underwriters, or designees, for an amount equal to 5% of the number of the shares of common stock sold to the public, and assuming a per share exercise price equal to 125% of the price per share in this offering. See "Underwriting" on page 92 of the first appearing prospectus contained within this registration statement for information on underwriting arrangements.
(4) No registration fee required pursuant to Rule 457(g) under the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant 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 , 2018

PRELIMINARY PROSPECTUS

Shares of Common Stock

This is the initial public offering of our common stock. Prior to this offering there has been no public market for our common stock. We are offering shares of common stock. We currently expect the initial public offering price to be between $ and $ per share.

We plan to apply to list our common stock on the Nasdaq Capital Market, or Nasdaq, under the symbol "SQL."

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 9 of this prospectus.

	Per Share	Total
Public offering price	$	$
Underwriting discounts and commissions[(1)]	$	$
Proceeds to us, before expenses	$	$

(1) See "Underwriting" beginning on page 92 of this prospectus for a description of the compensation payable to the underwriters.

We have granted to the underwriters an option to purchase up to additional shares of common stock at the public offering price, less the underwriting discounts and commissions, for 45 days after the date 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.

Delivery of the shares of common stock is expected to be made on or about , 2018.

WallachBeth Capital, LLC

The date of this prospectus is , 2018

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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 shares 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 shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

Through and including , 2018 (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.

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. 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," "DRS" and "Sequence the Lower Limit," 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:

"CRISPR" is an abbreviation of "Clustered Regularly Interspaced Short Palindromic Repeats" which is a family of DNA sequences found within the genomes of prokaryotic organisms such as bacteria. CRISPR is used to refer to bacterial defense systems which can be programmed to target specific areas of genetic code to edit DNA at precise locations.

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

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

"Genome" is an organism's complete set of DNA.

"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.

"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.

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

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

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

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

"Transcriptome" is an organism's complete set of RNA molecules at an active cellular state.

"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 common stock. 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 life sciences instrumentation and services company focused on providing our True Single Molecule Sequencing (tSMS™) technology to the scientific and medical community in order to accelerate the understanding of the molecular mechanisms of disease and fundamental biological processes. We have developed and offer a unique, proprietary sequencing technology platform in the multi-billion-dollar Next Generation Sequencing ("NGS") market, ideally suited for emerging applications in RNA-based diagnostics, precision medicine, and epigenetics. Our technology advantage provides a simple method of quantifying DNA and RNA molecules at single molecule resolution, eliminating bias from PCR amplification, ligation, or other library preparation steps required by other technologies. Data produced by our tSMS platform generate accurate, reproducible molecular profiles, often revealing previously unknown characteristics and providing new insights into the biology being researched. Leveraging our expertise with the tSMS technology platform, we aim to provide the scientific and medical communities with the tools which generate precise, personalized diagnostic and therapeutic information that could enable scientific discoveries leading to improved outcomes for patients with chronic and fatal diseases.

The global NGS market is projected to reach $16.35 billion by 2024, nearly tripling from an estimated $5.70 billion in 2018 at a compound annual growth rate ("CAGR") of 19.2%. With the advent of the precision medicine trend, RNA sequencing is emerging as a relatively new and rapidly growing portion of the overall NGS market, estimated at $2.1 billion globally in 2020, up from $1.0 billion in 2015. The global epigenetics market size is expected to reach $22.05 billion by 2025, progressing at a CAGR of 19.7% during the forecast period. Our tSMS platform is unique as it is a single molecule platform capable of sequencing billions of molecules in parallel, positions us as both competitive and complementary with other NGS platforms. The recent proposed acquisition of Pacific Biosciences Inc., a single molecule platform company, by Illumina, Inc. for $1.2 billion highlights the importance of single molecule sequencing platform in the NGS market.

Our strategy is to generate revenue through product sales, sequencing services and research grants in applying our single molecule sequencing platform to develop a wide variety of RNA-based applications. Our customers are consumers of our NGS products and services as academic and government institutes, hospitals and medical centers, pharmaceutical and biotechnology companies, non-profit research organizations and agricultural genomics organizations. Our technology has implications in RNA-based discovery of biomarkers for the early detection of diseases, specifically cardiovascular artery disease and epithelial cancer. As we unlock the inherent advantages of single molecule sequencing, we aim to integrate our tSMS platform in the development of novel diagnostic and therapeutic applications in the rapidly emerging precision medicine market.

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.

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.

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 few 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. The short reads can be used to further fill in the gaps from the data. For the molecular counting application, a large amount of independent reads from the 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.

Over the past two decades, researchers and clinicians have used NGS technologies to gain a deeper understanding of nucleic acids and the biological mechanisms they control. These areas of scientific advancement encompass the identification of disease-associated biomarkers, discovery of molecules for drug development, novel applications for early screening and diagnosis, and, more recently, the creation of genome editing technologies such as CRISPR. Taken together, these technologies are having a profound impact on the lives of patients and hold the promise for delivering cures for many life-threatening diseases. While progress is being made on multiple fronts through the combined utilization of these technologies, there remains a wide gap between the expanding needs of researchers and the available tools with capabilities specialized to meet this recurring demand. This results in a significant market opportunity. Based upon our technology development, scientific collaborations and activities, and our understanding of these markets, we believe that the tSMS platform is uniquely positioned to address key segments of the life sciences market by providing access to a broad range of single molecule applications.

Our 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 can choose to analyze from thousands to many billions of single molecules in a single experiment. This ability to analyze nucleic acids at single molecule resolution, without any library preparation, amplification, or ligation steps, is the main driver behind the highly accurate and reproducible data generated by our tSMS platform.

Our platform captures individual DNA and RNA molecules that range from less than 20 bases to more than 1 kilobase as an input. Our tSMS technology can perform sequencing analysis on short read as well as long read DNA samples. The platform combines a patented fluorescence-based optical detection apparatus with a precision microfluidics and thermal control system to perform sequencing-by-synthesis reactions. The real time image processing software, supplemented with a powerful machine learning module, overlays the images to produce sequence information for individual molecules as an output. We believe that our tSMS platform offers critical advantages over existing technologies as follows:

- Minimal Sample Preparation — Preserves the sample integrity, and avoids the bias and errors in the sequence data output;
- Greater Sensitivity — our unique, amplification and library-free sequencing technology enables detection of subtle changes in molecular profiles that we believe are undetectable with other methods;
- High Accuracy — Each molecule is sequenced individually without the need for phasing, which provides an accurate dataset across a broad range of molecular inputs; and

- Seamless Flexibility — Provides the ability to control throughput and apply diverse applications. The tSMS platform has the ability to scale the throughput across a range of small to large projects.

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 breakthroughs in genomic medicine that address the critical concerns involved with today's precision medicine.

We generate our revenues through a combination of product sales, fee-for-sequencing 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 sequencing 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.
    - 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 the 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 have assembled an experienced management team, board of directors, scientific founders and advisory board who bring extensive industry experience to our Company and business strategy. The members of our team have deep experience in discovering, developing and commercializing with a particular focus on sequencing products and applications, having built emerging growth companies from the ground up and led management teams of larger established companies in diverse sectors of the economy.

Summary Risks Related to Our Business

Our business is subject to a number of risks, including risks that may prevent us from achieving our business objectives or may adversely affect our business, financial condition, results of operations, cash flows and prospects that you should consider before making a decision to invest in our common stock.

Since inception we have incurred net losses, have used net cash in our operations and have funded our business and operations primarily through proceeds from promissory notes from our majority stockholder, private placement of equity securities and convertible notes. We expect to continue to require significant future financing to fund our operating activities for the foreseeable future as we continue our research and development activities to develop products that can be commercialized to generate revenue. Our future capital needs are uncertain and 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 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, stock price and our relationships with third parties with whom we have business relationships, at least until additional funding is obtained. As a result, substantial doubt exists about our ability to continue as a going concern as of the date hereof. The accompanying financial statements do not include any adjustment for the possible future effects on the recoverability and

classification of recorded assets, or the amount and classification of liabilities that might be different should we be unable to continue as a going concern based on the outcome of the uncertainties described above. Other risks include, but are not limited to, the following:

- Our products and services may fail to achieve and sustain sufficient market acceptance at levels sufficient to support our costs.
- We may be unable to develop new products in a cost-effective manner, or at all.
- We have limited experience as a commercial company and may not be able to manage our growth effectively.
- We operate in a highly competitive industry and we may not be able to compete effectively.
- Rapidly changing technology could render our products, services or technology obsolete.
- We may be unable to adequately protect our intellectual property worldwide.
- We have relied on our majority shareholder to fund our working capital needs, including portions of our overhead.

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 9 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.

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, formed SeqLL as a limited liability company to further the development of tSMS. SeqLL then purchased much of our physical assets from Helicos, including, among other things, sequencers, laboratory equipment, internal servers, protocols and data analysis procedures through Helicos' bankruptcy proceedings that began in 2012. In addition, we entered into a non-exclusive license agreement for certain intellectual property of Helicos and the pioneering tSMS technology. We then established a revenue producing sequencing services and instrumentation business while in parallel we re-designed the original Helicos technology with customer-friendly user interface and a reliable system architecture.

THE OFFERING

Common stock offered by us	shares.
Underwriters' over-allotment option	We have granted the underwriters an option for a period of 45 days from the date of this prospectus to purchase an additional shares of common stock.
Common stock to be outstanding after this offering	shares.
Use of proceeds	We currently intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, to (1) to expand our commercial operations to grow sequencing services; (2) to build additional sequencing instruments to support sequencing services expansion; (3) to build consumables and lab resources to support sequencing services expansion; (4) to improve and update our tSMS technology and instruments to develop additional applications; (5) to support and expand our customers in the United States and internationally; (6) to pursue business development opportunities; and (7) for working capital and other general corporate purposes. See "Use of Proceeds" on page 32.
Risk Factors	See "Risk Factors" on page 9 a discussion of certain of factors to consider carefully before deciding to purchase any shares of our common stock.
Nasdaq Capital Market Symbol	"SQL"

The number of shares of our common stock to be outstanding after this offering is based on 9,000,000 shares of common stock outstanding as of September 30, 2018, and the automatic conversion of all outstanding shares of our preferred stock into an aggregate of 5,791,664 shares of our common stock, which will occur immediately prior to the closing of this offering and excludes as of such date:

- 1,071,070 shares of our common stock issuable upon the exercise of warrants, at a weighted average exercise price of $0.71 per share;
- shares of our common stock that may be issued upon exercise of the Underwriters' Warrants at an exercise price of $, which represents 5% of the shares of common stock being offered hereby and 125% of an assumed public offering price of $, which is the midpoint of the initial public offering price range reflected on the cover of this prospectus;
- 1,685,000 shares of our common stock issuable upon the exercise of outstanding stock options under our 2014 Equity Incentive Plan, or the 2014 Plan; and
- 315,000 shares of our common stock reserved for future issuance under the 2014 Plan.

Unless otherwise indicated, all information contained in this prospectus assumes:

- the automatic conversion of all outstanding shares of our preferred stock into an aggregate of 5,791,664 shares of our common stock, which will occur immediately prior to the closing of this offering;
- no exercise by the underwriters of their over-allotment option or the warrants to purchase [•] shares of our common stock;
- no exercise of outstanding options or warrants described above; and
- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws immediately prior to the closing of this offering.

SUMMARY FINANCIAL DATA

The following tables set forth a summary of our historical financial data as of, and for the periods ended on, the dates indicated below. The consolidated statements of operations data for the years ended December 31, 2017 and 2016, and balance sheets data as of December 31, 2017 and 2016 are derived from our audited consolidated financial statements included elsewhere in this prospectus.

The following summary financial information should be read in connection with, and is qualified by reference to, our financial statements and related notes thereto and the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this prospectus. Our historical results are not necessarily indicative of results to be expected in any future period.

	For The Years Ended December 31,	
	2017	**2016**
Consolidated Statements of Operations:		
Revenue		
Sales	$ 1,138,052	$ 811,743
Other revenue	200,700	127,939
Total revenue	1,338,752	939,682
Cost of sales	1,084,518	520,095
Gross profit	**254,234**	**419,587**
Operating expenses		
Research and development	974,531	1,113,829
General and administrative	806,897	609,982
Total operating expenses	1,781,428	1,804,811
Operating loss	**(1,527,194)**	**(1,385,224)**
Other income and expenses		
Other income	—	1,614
Interest and other expenses	(179,740)	(50,740)
Total other expenses, net	(179,740)	(49,126)
Net loss	**(1,706,934)**	**(1,434,350)**
Net loss per share – basic and diluted	**$ (0.19)**	**$ (0.16)**
Weighted average common shares – basic and diluted	**9,000,000**	**9,000,000**

	As of December 31, 2017		
	Actual	Pro Forma[1]	Pro Forma as Adjusted[2][3]
Balance Sheet Data:			
Cash	$ 30,058	$	$
Working capital deficit	$(1,964,445)	$	$
Total assets	$ 1,079,515	$	$
Total liabilities	$ 2,833,898	$	$
Accumulated deficit	$ 4,303,374	$	$
Total stockholders' deficit	$(1,754,383)	$	$

(1) Gives effect to the automatic conversion of all outstanding shares of our preferred stock into an aggregate of 5,791,664 shares of our common stock, and the filing and effectiveness of our amended and restated certificate of incorporation, which 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 shares of our common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the 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.

(3) A $1.00 increase or decrease in the assumed initial public offering price of $ per share, 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 $ million, assuming the number of shares 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 one million in the number of shares we are offering would increase or decrease, as applicable, each of cash, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by $ million, assuming the assumed initial public offering price of $ per share, 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.

RISK FACTORS

Investing in our common stock 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 common stock. 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 common stock 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 Form S-1 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, 2017. As a result, it may be more difficult for the Company 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 reagent kits and consumables in order to produce sequencing data at sufficient levels to generate expected revenue. We will need to increase our internal capabilities and collaborate with other partners in order to successfully expand sales of our reagent kits and consumables 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.

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, 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, materially adversely affecting 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.

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

We 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 operating expenses and capital expenditure requirements through June 30, 2019. However, we will need to raise substantial additional capital in the future to:

- expand our sales and marketing efforts to further commercialize our products;
- enter into collaboration agreements, if any, or in-license other products and technologies;
- hire additional personnel;
- add operational, financial and management information systems;
- incur increased costs as a result of operating as a public company;
- lease additional laboratory space to accommodate expanded operations and increased human resources;
- expand our research and development efforts to improve our product offerings and to successfully launch new products; and
- seek FDA approval to market our existing products or new products 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. 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.

Comprehensive tax reform legislation could adversely affect our business and financial condition.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act, or the TCJA, that significantly reforms the Internal Revenue Code of 1986, as amended. The TCJA, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal tax rate of 35% to a flat rate of 21%, limitation of the tax deduction for interest expense to 30% of adjusted earnings (except for certain small businesses), limitation of the deduction for net operating losses to 80% of annual taxable income and elimination of net operating loss carrybacks and modifying or repealing many business deductions and credits (including reducing the business tax credit for certain clinical testing expenses incurred in the testing of certain drugs for rare diseases or conditions generally referred to as “orphan drugs”). We continue to examine the impact this tax reform legislation may have on our business. However, the effect of the TCJA on our business, whether adverse or favorable, is uncertain and may not become evident for some period of time. We urge investors to consult with their legal and tax advisers regarding the implications of the TCJA on an investment in our common stock.

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 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 a direct result of sequencing methodology not requiring 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 consumables, which is generally limited to replacing, or at our option, giving credit for any consumable 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 were 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 any 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 require 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 U.S. Food and Drug Administration ("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 they 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 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; changes in our pricing policies or those of our competitors; general economic, industry and market conditions; 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, labeling, 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, 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 which 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 fulfillment 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) pursuant to a non-exclusive licensing agreement. In addition, we sub-license intellectual property that is important to our business from Arizona Science and Technology Enterprises LLC pursuant to a non-exclusive sublicense. If we fail to meet our obligations under these two licenses, the licensors could terminate these licenses. 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 these licenses 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, these two license agreements are non-exclusive and the licensors may license the technology to our competitors, which may result is 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.

Our licensed IP and future IP will have limited window of enforcement.

In addition, our licensed IP and future IP will have limited window of enforcement. Substantially all of our licensed IP are expected to expire from 2021 – 2028, excluding any extension or adjustment of patent term that may be available. This gives us a limited window of opportunity to market and expand our proprietary technology and services. We may face development of similar technology from our competitors after the expiration of our IP portfolio which will 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-hows to make the technology work effectively and reliably over the last decade, the 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 amount of time and resources to protect intellectual property and proprietary rights.

Filing, prosecuting, and defending patents on our product 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 USPTO or to foreign patent authorities or become involved in opposition, derivation, revocation, reexamination, 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.

Some of our trademark applications may not be allowed for registration, and our registered trademarks may not be maintained or enforced. In addition, in the U.S. Patent and Trademark Office and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose 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 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;
- 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 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

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

Prior to this offering, there was no public market for shares of our common stock. The offering price for the shares of our common stock 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 following this offering. As a result, the trading price of our common stock is likely to be volatile, which may prevent you from being able to sell your shares at or above the public offering price. Our stock price 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;
- 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 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 price 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. 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 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. Although we will apply to have our common stock listed on the Nasdaq, an active trading market for our common stock may never develop or be sustained following this offering. You may not be able to sell your shares quickly or at the market price if trading in our common stock is not active. The initial public offering price for the shares will be determined by negotiations between us and the underwriters and may not be indicative of prices that will prevail in the trading market. You may not be able to sell your shares of our common stock 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 and may impair our ability to enter into strategic partnerships or acquire companies or products by using our shares of common stock as consideration.

Concentration of ownership by our principal stockholders may result in control by such stockholders of the composition of our board of directors.

Our existing significant stockholders, executive officers, directors and their affiliates beneficially own a significant number of our outstanding shares of common stock. 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. This control could have the effect of delaying or preventing a change of control of our company or changes in management and will make the approval of certain transactions difficult or impossible without the support of these stockholders.

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

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. Such a de-listing would likely have a negative effect on the price of our common stock and would impair your ability to sell or purchase our common stock when you wish to do so. In the event of a de-listing, we would take actions to restore our compliance with Nasdaq Marketplace Rules, but our

common stock may not be listed again, stabilize the market price or improve the liquidity of our common stock, prevent our common stock from dropping below the Nasdaq minimum bid price requirement or prevent future non-compliance with the Nasdaq Marketplace Rules.

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 after the 180-day contractual lock-up and other legal restrictions on resale discussed in this prospectus lapse, 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 based on shares outstanding as of the date of this prospectus, we will have outstanding shares of common stock, assuming no conversion of existing Notes or exercise of outstanding options and warrants. Of these shares, shares of common stock, 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 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. 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.

After the lock-up agreements pertaining to this offering expire and based on shares outstanding after this offering, additional shares will be eligible for sale in the public market. In addition, upon issuance, the 1,685,000 shares subject to outstanding options under our 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 shares of common stock in this offering, you will suffer immediate dilution of your investment.

The public offering price of our common stock will be substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our net tangible book value per share after this offering. Based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, you will experience immediate dilution of $ 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 % of the aggregate price paid by all purchasers of our stock but will own only approximately % 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 2023 (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 nonaffiliates 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.

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

The trading market for our common stock 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 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, our stock price could decline. In addition, if our operating results fail to meet the forecast of analysts, our stock price 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 could decrease, which might cause our stock price 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.

Provisions in our certificate of incorporation and bylaws, as amended and restated, 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.

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 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 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 $ million from the sale of the shares of common stock offered in this offering, or approximately $ million if the underwriters exercise their option to purchase additional shares in full, based on an assumed initial public offering price of $ per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, 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 $ per share, 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 $ million, assuming that the number of shares 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 shares we are offering. An increase (decrease) of 1,000,000 in the number of shares 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 $ million, assuming the initial public offering price stays the same.

We currently expect to use the net proceeds from this offering: (1) to expand our commercial operations to grow sequencing services; (2) to build additional sequencing instruments to support sequencing services expansion; (3) to build consumables and lab resources to support sequencing services expansion; (4) to improve and update our tSMS technology and instruments to develop additional applications; (5) to support and expand our customers in the United States and internationally; (6) to pursue business development opportunities; and (7) for working capital and other general corporate purposes.

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.

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 September 30, 2018:

- on an actual basis;
- on a pro forma basis to reflect (1) the automatic conversion of all outstanding shares of our preferred stock into 5,791,664 shares of our common stock, which will occur 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 conversion had occurred on September 30, 2018; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, 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 common stock 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.

	Actual	Pro Forma	Pro Forma As Adjusted[(1)]
Cash and cash equivalents	$		
Total debt	$		
Series A-1 Convertible preferred stock, par value $0.00001 per share; 3,125,000 shares authorized, 3,125,000 shares issued and outstanding, actual; no shares authorized, no shares issued or outstanding, pro forma and pro forma as adjusted	$		
Series A-2 convertible preferred stock, par value $0.00001 per share; 5,654,762 shares authorized, 2,666,664 shares issued and outstanding, actual; no shares authorized, no shares issued or outstanding, pro forma and pro forma as adjusted	$		
Common stock, par value $0.00001 per share; 20,299,261 shares authorized, 9,000,000 shares issued and outstanding, actual; 20,299,261 shares authorized, 14,791,664 shares issued and outstanding, pro forma; [•] shares authorized, [•] shares issued and outstanding, pro forma as adjusted	$		
Additional paid-in capital			
Accumulated deficit	$ ()		
Total stockholders' (deficit) equity	$ ()		
Total capitalization	$		

(1) A $1.00 increase or decrease in the assumed initial public offering price of $ per share, 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 $ million, assuming the number of shares 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 one million in the number of shares we are offering would increase or decrease, as applicable, each of cash, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by $ million, assuming the assumed initial public offering price of $[ ] per share, 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 number of shares of our common stock to be outstanding after this offering is based on 9,000,000 shares of common stock outstanding as of September 30, 2018 and 5,791,664 shares of our common stock issuable upon the conversion of the Preferred Series A stock, and excludes as of such date:

- 1,071,070 shares of our common stock issuable upon the exercise of warrants at a weighted average exercise price of $0.71 per share;
- shares of our common stock that may be issued upon exercise of the Underwriters' Warrants at an exercise price of $, which represents 5% of the shares of common stock being offered hereby and 125% of an assumed public offering price of $, which is the midpoint of the initial public offering price range reflected on the cover of this prospectus;
- 1,685,000 shares of our common stock issuable upon the exercise of outstanding stock options under our 2014 Plan; and
- 315,000 shares of our common stock reserved for future issuance under the 2014 Plan.

DILUTION

If you invest in our common stock 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 September 30, 2018. Our historical net tangible book value (deficit) as of September 30, 2018, was approximately ($[•]), or ($[•]) per share of common stock. Our pro forma net tangible book value (deficit) as of September 30, 2018 was ($[•]) or ($[•]) per share of common stock, after giving effect to the automatic conversion of all outstanding shares of our preferred stock into an aggregate of [•] shares of our common stock, which will occur immediately prior to the closing of this offering.

Pro forma as adjusted net tangible book value (deficit) is our pro forma net tangible book value, after giving further effect to the sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share, 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. This amount represents an immediate increase in pro forma net tangible book value (deficit) of $ per share to our existing stockholders, and an immediate dilution of $ per share to new investors participating in this offering.

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

Assumed initial public offering price per share		
Historical net tangible book value (deficit) per share as of September 30, 2018	$	
Increase in pro forma net tangible book value (deficit) attributable to conversion of our convertible preferred stock		
Pro forma net tangible book value (deficit) per share as of September 30, 2018, before giving effect to this offering		
Increase in pro forma net tangible book value (deficit) per share attributable to new investors participating in this offering		
Pro forma as adjusted net tangible book value (deficit) per share after this offering		
Dilution in pro forma net tangible book value (deficit) per share to new investors participating in this offering		

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

Similarly, a one million share increase or decrease in the number of shares 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) per share after this offering by approximately $ and decrease or increase, as appropriate, the dilution in pro forma net tangible book value (deficit) per share to investors participating in this offering by approximately $, assuming the assumed initial public offering price of $ per share, 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.

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

The following table sets forth, as of the date of this prospectus, on the pro forma as adjusted basis described above, 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 $ per share, 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:

	Shares Purchased		Total Consideration		Weighted Average Price per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
New investors		%	$	%	$
Total		%	$	%	$

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 % 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 % 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.

A $1.00 increase or decrease in the assumed initial public offering price of $ per share, 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 $ million, assuming the number of shares 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 one million shares in the number of shares offered by us would increase or decrease, as appropriate, the total consideration paid by new investors by $ million, 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.

The number of shares of our common stock to be outstanding after this offering is based on 9,000,000 shares of common stock outstanding as of September 30, 2018 and 5,791,664 shares of our common stock issuable upon the conversion of the Preferred Series A stock and excludes as of such date:

- 1,071,070 shares of our common stock issuable upon the exercise of warrants, at a weighted average exercise price of $0.71 per share;

- shares of our common stock that may be issued upon exercise of the Underwriters' Warrants at an exercise price of $, which represents 5% of the shares of common stock being offered hereby and 125% of an assumed public offering price of $, which is the midpoint of the initial public offering price range reflected on the cover of this prospectus;
- 1,685,000 shares of our common stock issuable upon the exercise of outstanding stock options under our 2014 Plan; and
- 315,000 shares of our common stock reserved for future issuance under the 2014 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

We are a life sciences instrumentation and services company focused on providing our tSMS™ technology to the scientific and medical community in order to accelerate the understanding of the molecular mechanisms of disease and fundamental biological processes. We have developed and offer a unique, proprietary sequencing technology platform in the multi-billion-dollar NGS market, ideally suited for emerging applications in RNA-based diagnostics, precision medicine, and epigenetics. Our technology advantage provides a simple method of quantifying DNA and RNA molecules at single molecule resolution, eliminating bias from PCR amplification, ligation, or other library preparation steps required by other technologies. Data produced by our tSMS platform generate accurate, reproducible molecular profiles, often revealing previously unknown characteristics and providing new insights into the biology being researched. Leveraging our expertise with the tSMS technology platform, we aim to provide the scientific and medical communities with the tools which generate precise, personalized diagnostic and therapeutic information that could enable scientific discoveries leading to improved outcomes for patients with chronic and fatal diseases.

Our strategy is to generate revenue through product sales, sequencing services and research grants in applying our single molecule sequencing platform to develop a wide variety of RNA-based applications. Our customers are consumers of our NGS products and services as academic and government institutes, hospitals and medical centers, pharmaceutical and biotechnology companies, non-profit research organizations and agricultural genomics organizations. Our technology has implications in RNA-based discovery of biomarkers for the early detection of diseases, specifically cardiovascular artery disease and epithelial cancer. As we unlock the inherent advantages of single molecule sequencing, we aim to integrate our tSMS platform in the development of novel diagnostic and therapeutic applications in the rapidly emerging precision medicine market.

Recent Developments

Series A-2 Preferred Stock

Through September 30, 2018, we issued 2,666,664 shares of Series A-2 preferred stock, at a purchase price of $1.68 per share, to certain accredited investors, of which 729,165 shares were issued in 2016. The gross proceeds from the Series A-2 preferred stock was $3,254,999 and we incurred offering expenses of $18,674.

Senior Convertible Notes and Warrants

From January 9, 2018 to September 19, 2018 we received proceeds aggregating $1,435,000 pursuant to the issuance of convertible promissory notes (the "Notes"), and five-year warrants for the purchase of 51,250 shares of our common stock (the "Warrants"). The Notes bear interest at 10% per annum. On September 30, 2018, the Notes along with all outstanding prior senior convertible notes from the same lender totaling $3,135,000 were exchanged for (i) 1,866,071 shares of Series A-2 Preferred Stock; (ii) a warrant for 900,000 shares of common stock exercisable at $1.68 per share; (iii) a warrant for 111,964

shares of common stock exercisable at $1.68 per share and (iv) a 1-year promissory note for $360,710 bearing 10% interest per annum and payable in cash upon a public offering for the accrued interest under the Notes as of September 30, 2018.

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, ability to obtain future capital, 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, dependence on licensing agreements and lack of sales and marketing activities. These risks and other factors raises substantial doubt about our ability to continue as a going concern as of the date of the filing of this Registration Statement.

We have relied exclusively on private placements with a small group of accredited investors, primarily by William St. Laurent, our founder, 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 Mr. St. Laurent 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 on raising additional funds in the first half of 2019. In addition, we are seeking alternative options to add additional cash. 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, 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 as of the date of the filing of this Registration Statement. 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 and our existing financial resources are adequate to satisfy our expected liquidity requirements through the end of June 30, 2019.

Results of Operations

The following table represents selected items in our consolidated statements of operations for the years ended December 31, 2017 and 2016:

	For The Years Ended December 31,	
	2017	2016
Consolidated Statements of Operations:		
Revenue		
Sales	$ 1,138,052	$ 811,743
Other revenue	200,700	127,939
Total revenue	1,338,752	939,682
Cost of sales	1,084,518	520,095
Gross profit	**254,234**	**419,587**
Operating expenses		
Research and development	974,531	1,113,829
General and administrative	806,897	690,982
Total operating expenses	1,781,428	1,804,811
Operating loss	**(1,527,194)**	**(1,385,224)**
Other income and expenses		
Other income	—	1,614
Interest and other expenses	(179,740)	(50,740)
Total other expenses, net	(179,740)	(49,126)
Net loss	**(1,706,934)**	**(1,434,350)**
Net loss per share – basic and diluted	**$ (0.19)**	**$ (0.16)**
Weighted average common shares – basic and diluted	**9,000,000**	**9,000,000**

Overview

Since our incorporation in 2014, we have devoted substantially most of our efforts to business planning, research and development. The Company incurred net losses of $1,706,934 and $1,434,350 and had negative cash flow from operating activities of $1,125,597 and $2,150,424 for the years ended December 31, 2017 and 2016, respectively, and had an accumulated deficit of $4,303,374 as of December 31, 2017. These conditions among others raise substantial doubts about the Company's ability to continue as a going concern. The Company's ability to continue to operate is dependent upon raising additional funds to finance its activities.

Comparison of Years Ended December 31, 2017 and 2016

Revenues

Revenues earned during the year ended December 31, 2017 were $1,338,752 as compared to revenues of $939,682 during the year ended December 31, 2016. During 2017, revenues were generated through product sales of the tSMS instrument of $639,789 and sequencing services of $398,011 and consumables of $100,251 and grant monies of $200,700 as compared to no product sales of the tSMS instruments, sequencing services of $567,925, consumables of $148,964 and grant monies of $127,939 during the year ended December 31, 2016. The increase in revenues was primarily a result of the sale of tSMS instruments.

Gross Profit

Gross profits earned during the year ended December 31, 2017 were $254,234 as compared to gross profits of $419,587 during the year ended December 31, 2016. During 2017, gross profits for the year ended December 31, 2017 were generated primarily through the sales of tSMS instruments as compared to primarily sequencing services for the year ended December 31, 2017. The decrease was primarily a result of an increase in cost of sales of $564,423, or 109%, from $520,095 due to the application of the cost of goods associated with the 2016 development of the beta instruments sold in 2017.

Research and Development Expenses

Research and development expenses decreased by $139,298, or 13%, from $1,113,829 for the year ended December 31, 2016 to $974,531 for the year ended December 31, 2017. The decrease is primarily due to lower costs related to outside consulting services related to the development of the tSMS instrument.

General and Administrative Expenses

General and administrative expenses increased by $115,915, or 17%, from $690,982 for the year ended December 31, 2016 to $806,897 for the year ended December 31, 2017. The increase is primarily due to higher payroll, legal, accounting and consulting activities during 2017.

Other Income and Expense

We recognized interest expense of $179,740 and $50,740 during the years ended December 31, 2017 and 2016, respectively, representing an increase of $129,000, or 254%. The increase in interest expense is primarily due to increased notes payable balances.

Net Loss

Our net loss for the year ended December 31, 2017, increased by $272,584, or 19%, to $1,706,934 as compared to $1,434,350 for the year ended December 31, 2016. The increase was primarily attributable to (i) an increase in cost of sales of $564,423, (ii) an increase in general and administrative expenses of $115,915, and (iii) an increase in interest and other expenses of $129,000.

Liquidity and Capital Resources

We have incurred losses since our incorporation in 2014 and negative cash flows from operating activities for the years ended December 31, 2017 and 2016. As of December 31, 2017, we had an accumulated deficit of $4.3 million. Since inception, we have funded our operations primarily through private placements of equity and convertible debt securities as well as from modest sales coming from operations. As of December 31, 2017, we had $30,058 of cash.

Through September 30, 2018, in connection with our senior convertible debt financing and subsequent exchange of these senior convertible notes for Series A-2 Preferred Stock, we issued a promissory note for an aggregate principal amount of $360,710. This note is due and payable on its first anniversary and bears interest at a rate of 10% per annum. The note will be paid in cash upon our initial public offering.

On March 15, 2018, the Company negotiated a final settlement payment for the promissory notes issued to Helicos Biosciences Company in the amount of $105,000 (the “Helicos Note”). The principal and interest outstanding at December 31, 2017 on the Helicos Note was $290,416. The Helicos Note was cancelled and forgiven upon acceptance of payment.

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 existed about our ability to continue as a going concern as of the date of the filing of this registration statement. 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 measure our liquidity in a variety of ways, including the following:

	December 31,	
	2017	2016
Cash	$ 30,058	$ 207,253
Working capital deficiency	$(1,964,445)	$(128,011)

Based upon our working capital as of December 31, 2017, we require additional equity and or debt financing in order to meet our obligations as they become due within one year after the date of this prospectus and sustain operations. These factors, among others, raise substantial doubt about our ability to continue as a going concern.

We will require significant amounts of additional capital to continue to fund our operations and commence and complete our research and development activities. We currently have limited resources to continue to fund our operations and if we are not able to obtain additional cash resources, we will not be able to continue operations. We will continue seeking additional financing sources 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. 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.

Recent Accounting Pronouncements

In June 2018, Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2018-07, Compensation — Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting. ASU 2018-07 expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. An entity should apply the requirements of Topic 718 to nonemployees awards except for specific guidance on inputs to an option pricing model and the attribution of cost. ASU 2018-07 specifies that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor’s own operations by issuing share-based payment awards, and that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under Topic 606 Revenue from Contracts with Customers. The Company is currently evaluating the impact of adopting this guidance.

In January 2017, FASB issued ASU No. 2017-01, Clarifying the Definition of a Business (“ASU 2017-01”). The standard clarifies the definition of a business by adding guidance to assist entities in evaluating whether transactions should be accounted for as acquisitions of assets or businesses. ASU 2017-01 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Under ASU 2017-01, to be considered a business, the assets in the transaction need to include an input and a substantive process that together significantly contribute to the ability to create outputs. Prior to the adoption of the new guidance, an acquisition or disposition would be considered a business if there were inputs, as well as processes that when applied to those inputs had the ability to create outputs. Early adoption is permitted for certain transactions. Adoption of ASU 2017-01 may have a material impact on the Company’s consolidated financial statements if it enters into future business combinations.

In August 2016, FASB issued ASU No. 2016-15, Classification of Certain Cash Receipts and Cash Payments (a consensus of the Emerging Issues Task Force) (“ASU 2016-15”). The amendments in ASU 2016-15 address eight specific cash flow issues and apply to all entities that are required to present a statement of cash flows under ASC Topic 230, Statement of Cash Flows. The amendments in ASU 2016-15

are effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted, including adoption during an interim period. Adoption of ASU 2016-15 will not have a material impact on the Company's consolidated financial statements.

In March 2016, FASB issued ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting ("ASU 2016-09"). ASU 2016-09 simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Early adoption of ASU 2016-09 did not have a material impact on the Company's consolidated financial statements.

In February 2016, FASB issued ASU No. 2016-02, Leases (Topic 842) ("ASU 2016-02"). ASU 2016-02 addresses the financial reporting of leasing transactions. Under current guidance for lessees, leases are only included on the balance sheet if certain criteria, classifying the agreement as a capital lease, are met. This update will require the recognition of a right-of-use asset and a corresponding lease liability, discounted to the present value, for all leases that extend beyond 12 months. For operating leases, the asset and liability will be expensed over the lease term on a straight-line basis, with all cash flows included in the operating section of the statement of cash flows. For finance leases, interest on the lease liability will be recognized separately from the amortization of the right-of-use asset in the statement of operations and the repayment of the principal portion of the lease liability will be classified as a financing activity while the interest component will be included in the operating section of the statement of cash flows. This guidance is effective for annual and interim reporting periods beginning after December 15, 2019 as the Company is an emerging growth company. Early adoption is permitted. The Company has not yet completed the analysis of how adopting this guidance will affect its consolidated financial statements.

In January 2016, FASB issued ASU 2016-01 ("ASU 2016-01"), which amends the guidance in U.S. GAAP on the classification and measurement of financial instruments. Changes to the current guidance primarily affect the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. In addition, the ASU clarifies guidance related to the valuation allowance assessment when recognizing deferred tax assets resulting from unrealized losses on available-for-sale debt securities. The new standard is effective for fiscal years and interim periods beginning after December 15, 2017, and upon adoption, an entity should apply the amendments by means of a cumulative-effect adjustment to the balance sheet at the beginning of the first reporting period in which the guidance is effective.

In May 2014, FASB issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASU 2014-09"), which supersedes existing revenue recognition guidance. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods and services. The standard defines a five-step process to achieve this principle and requires companies to use more judgment and make more estimates than under the previous guidance. These judgments and estimates include identifying performance obligations in the customer contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU 2014-09 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts. The new standard is effective for fiscal years and interim periods beginning after December 15, 2018, as the Company is an emerging growth company. The Company is currently evaluating the impact of adopting this guidance.

Critical Accounting Policies and Estimates

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 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 impairment was recognized during the periods ending December 31, 2017 and 2016.

Stock-based Compensation

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

For awards granted to consultants and non-employees, compensation expense is recognized over the vesting period of the awards, which is generally the period during which services are rendered by such consultants and non-employees.

Derivative Liabilities

During 2017 and 2016, we issued warrants for a variable number of shares of common stock at an adjustable price. We determined that these warrants are derivative instruments pursuant to FASB ASC 815 "Derivatives and Hedging."

The accounting treatment of derivative financial instruments requires that we record the warrants as a liability at fair value and mark-to-market the instruments at fair values as of each subsequent balance sheet date. Any change in fair value is recorded as a change in the fair value of derivative liabilities for each reporting period at each balance sheet date.

Financial Accounting Standards Board ("FASB") Accounting Standards Codification "ASC 820," Fair Value Measurements and Disclosures, (FASB ASC 820), defines fair value, and establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

Level 1: Quoted prices for identical assets and liabilities traded in active exchange markets, such as the New York Stock Exchange.

Level 2: Observable inputs other than Level 1 including quoted prices for similar assets or liabilities, quoted prices in less active markets, or other observable inputs that can be corroborated by observable market data. Level 2 also includes derivative contracts whose value is determined using a pricing model with observable market inputs or can be derived principally from or corroborated by observable market data.

Level 3: Unobservable inputs supported by little or no market activity for financial instruments whose value is determined using pricing models, discounted cash flows methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgement or estimation; also includes observable inputs for non-binding single dealer quotes not corroborated by observable market data.

Fair value is a market-based measure considered from the perspective of the market participant rather than an entity-specific measure. Therefore, even when market assumptions are not readily available, the Company's own assumptions are set to reflect those that market participants would use in pricing the asset or liability at the measurement date.

The only liabilities measured at fair value on a recurring basis are the derivative warrants which represent Level 3 liabilities.

Revenue Recognition

Revenue from genetic sequencing services and equipment sales are recognized when there is persuasive evidence of an arrangement, service has been rendered or product has been delivered, the sales price is determinable, and collectability is reasonably assured. Service is deemed to be rendered when the results have been reported to the customer who ordered the sequencing. To the extent that sequencing services have been prepaid, but results have not yet been reported, recognition of all related revenue is deferred until results are reported.

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 you with 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 life sciences instrumentation and services company focused on providing our tSMS™ technology to the scientific and medical community in order to accelerate the understanding of the molecular mechanisms of disease and fundamental biological processes. We have developed and offer a unique, proprietary sequencing technology platform in the multi-billion-dollar NGS market, ideally suited for emerging applications in RNA-based diagnostics, precision medicine, and epigenetics. Our technology advantage provides a simple method of quantifying DNA and RNA molecules at single molecule resolution, eliminating bias from PCR amplification, ligation, or other library preparation steps required by other technologies. Data produced by our tSMS platform generate accurate, reproducible molecular profiles, often revealing previously unknown characteristics and providing new insights into the biology being researched. Leveraging our expertise with the tSMS technology platform, we aim to provide the scientific and medical communities with the tools which generate precise, personalized diagnostic and therapeutic information that could enable scientific discoveries leading to improved outcomes for patients with chronic and fatal diseases.

The global NGS market is projected to reach $16.35 billion by 2024, nearly tripling from an estimated $5.70 billion in 2018 at a CAGR of 19.2%. With the advent of the precision medicine trend, RNA sequencing is emerging as a relatively new and rapidly growing portion of the overall NGS market, estimated at $2.1 billion globally in 2020, up from $1.0 billion in 2015. The global epigenetics market size is expected to reach $22.05 billion by 2025, progressing at a CAGR of 19.7% during the forecast period. Our tSMS platform is unique as it is a single molecule platform capable of sequencing billions of molecules in parallel, positions us as both competitive and complementary with other NGS platforms. The recent proposed acquisition of Pacific Biosciences Inc., a single molecule platform company, by Illumina, Inc. for $1.2 billion highlights the importance of single molecule sequencing platform in the NGS market.

Our strategy is to generate revenue through product sales, sequencing services and research grants in applying our single molecule sequencing platform to develop a wide variety of RNA-based applications. Our customers are consumers of our NGS products and services as academic and government institutes, hospitals and medical centers, pharmaceutical and biotechnology companies, non-profit research organizations and agricultural genomics organizations. Our technology has implications in RNA-based discovery of biomarkers for the early detection of diseases, specifically cardiovascular artery disease and epithelial cancer. As we unlock the inherent advantages of single molecule sequencing, we aim to integrate our tSMS platform in the development of novel diagnostic and therapeutic applications in the rapidly emerging precision medicine market.

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. It is increasingly understood that the RNA 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. 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 nucleotide 1000 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. The short reads can be used to further fill in the gaps from the data. For the molecular counting application, a large amount of independent reads from the 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

Our target market of global NGS is projected to reach $16.35 billion by 2024, nearly tripling from estimated $5.70 billion in 2018 With the advent of the personalized medicine trend, RNA sequencing is emerging as a relatively new and rapidly growing portion of the overall NGS market, estimated at $2.1 billion globally in 2020, up from $1.0 billion in 2015. The tools and reagents segment of the RNA sequencing market is expected to grow from $566.8 million in 2015 to $1.0 billion in 2020 and RNA sequencing services estimated at $170.5 million in 2015 and is expected to reach $460.5 million by 2020.

Our tSMS technology platform produces data with diagnostics implications such as biomarker panels for cardiovascular diseases and various types of cancer, and offers an optimal solution for use in RNA sequencing applications. We anticipate using these strengths to capture a portion of the growing multi-billion dollar NGS market. We will strive to build and control intellectual property around the instruments, consumables, 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 agri-genomics organizations. We will market our sequencing technology, optimized for accurate analysis of genetic information, for development of potentially high growth applications in rapidly emerging sectors such as RNA-based diagnostics, precision medicine, spatial molecular profiling, and epigenetics. Many of our target customers are engaged in drug discovery, biomarker discovery, and companion diagnostics for supporting clinical trials.

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. Over the past two decades, the researchers and clinicians have used these technologies to gain a deeper understanding of nucleic acids, to study the biomarkers associated with diseases, to identify molecules for new drug discovery, to create novel applications for early screening and diagnosis, and more recently to create genome-editing. 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. The gap is affecting the speed and potential of the research, and is a result of the inherent limitations of current technologies. These limitations are summarized below:

- Biased results: The short-read polymerase chain reaction (PCR) sequencing technology 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.
- 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 RNA transcriptome, gene expression and biomarker discovery require accurate quantification of data. The long read single molecule technologies fall short due to smaller number of strand throughput required to substantiate the presence or absence of a biomarker. The short-read amplification technology fall short due to a skewed data representation caused by the non-linear amplification bias present in the system.
- 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.

Our Solution

Our tSMS platform offers a leading single molecule sequencing solution for DNA and RNA sequencing by performing unbiased detection of nucleic acids without the need for complex sample manipulation. Our tSMS platform incorporates high resolution, cost-effective and accurate technology to detect low levels of DNA and RNA. For example, RNA sequencing on the SeqLL platform detects

transcripts regardless of abundance and with high accuracy in quantifying gene expression changes associated with certain disease. SeqLL's unique, amplification and library-free sequencing technology enables detection of subtle changes in RNA transcript levels that are undetectable with other methods because of the above-mentioned limitations.

Our platform derives the 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, straight-forward sample preparation protocols. The technology uses a single stranded DNA and RNA material with length 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 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.

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

- 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.

- 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 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.

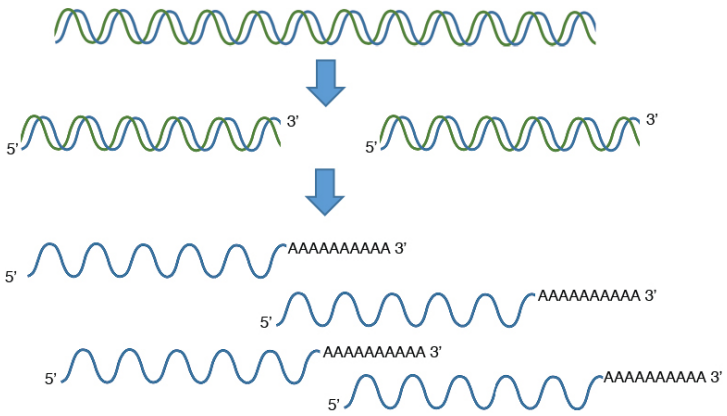
- High Accuracy — The tSMS platform provides an accurate set of data and results as well as a broader range of molecules to be evaluated. The ability to count each individual molecule, combined with simplified sample preparation and greater sample sensitivity, yields an accurate quantitative representation of sample in the final data. Our technology has been demonstrated to produce robust accurate short reads for a variety of applications.

- 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 consumables 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.

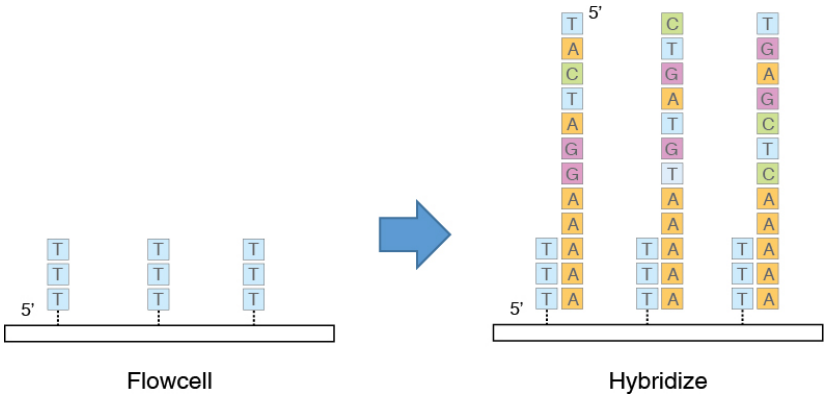
Our Gene Sequencing Methodology

The patented tSMS technology is the essence of the 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.

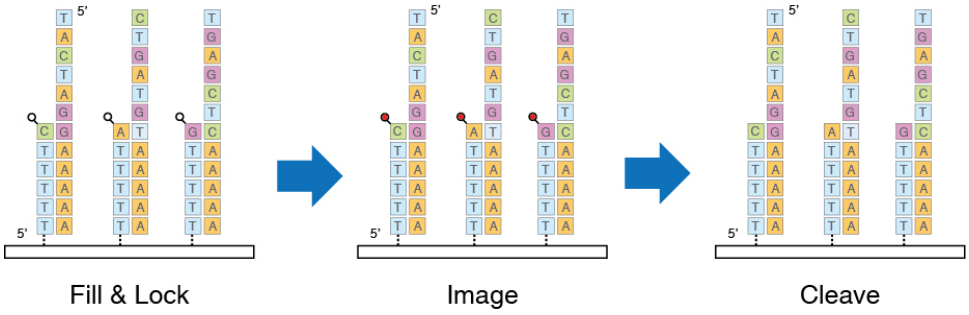
1. Sample preparation: A double helix strand is cut in to fragments of 100 – 200 nucleotides in length. In the case of the cfDNA and cfRNA material, this step is not necessary as cell-free strands are generally short and fit the profile of the input material. The strand fragments are then denatured to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



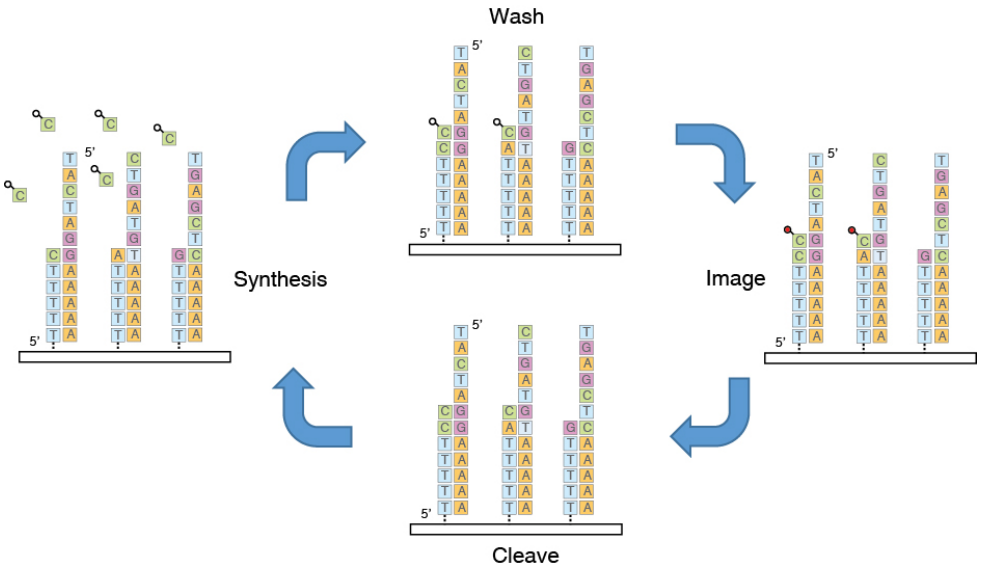
2. Sample loading: The strands are hybridized in a flowcell with billions of universal oligo T capture sites mobilized on the flowcell surface. The tSMS method typically utilizes a dT50 primer to initiate sequencing from a 3′ poly-A tail, although other capture primers may be used to increase the specificity 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 labeled nucleotides to the start of the strand. A laser illuminates the flow cell and the camera records the location of each captured sample strand. The flow cell 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:



a. Synthesis: DNA polymerase enzyme and the first of the four types of novel fluorescently labeled 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.

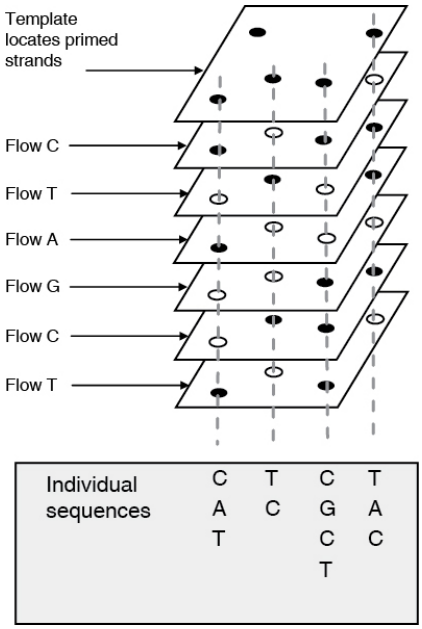
b. Wash: Excess polymerase and unincorporated nucleotides are then washed away. This step ensures that only the incorporated nucleotides are available for fluorescence imaging.

c. Image: The narrow bandwidth laser illuminates the flowcell surface to excite the fluorescently labeled nucleotides. The camera records the locations where fluorescently labeled nucleotides were added.

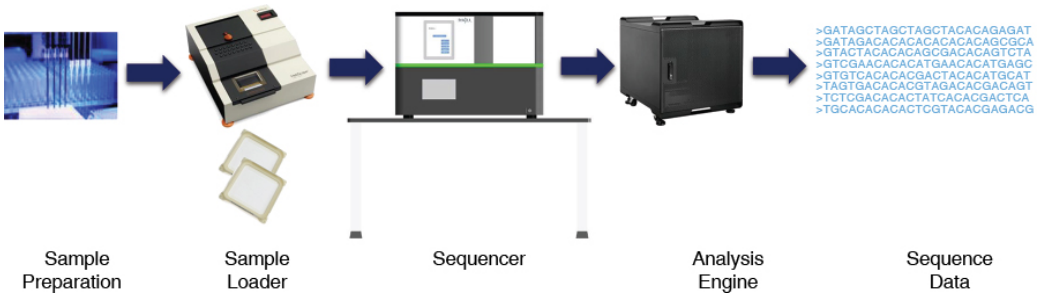
d. Cleave: The fluorescent dye molecules are then cleaved from the labeled nucleotides and washed away. This step ensures that these molecules are fluoresced only for that particular nucleotide addition cycle.

The process is repeated with each of the four types of labeled 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)



As described under our gene sequencing methodology above, the tSMS single molecule sequencing system combines a simplified operation with powerful capabilities to directly sequence original samples of RNA and DNA. The tSMS system consists of four major components:

1. Consumables: The flowcells and reagent kit are the major components of the consumables 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 in to 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 prepackaged 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 on to 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 3 to 6 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 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 of the instrument for both the record keeping and troubleshooting purposes.

Future Products

In the future, we expect to enter the clinical diagnostics market by partnering with biotech and pharma companies to develop RNA-based diagnostics. We plan to develop a clinical grade tSMS sequencer and to secure FDA clearance for use of the instrument for one or more clinical diagnostic tests. We intend to commercialize diagnostic tests where the tSMS platform offers accurate diagnostic capability, such as non-invasive prenatal testing (NIPT) for early pregnancy and high BMI mothers (below current detection levels), liquid biopsy for oncology, microbiome analysis, and RNA transcriptome-based diagnostics for cardiovascular disease, infection 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 its amplification-free, short-read, 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. This includes gene therapy technologies such as AAV therapy, CRISPR, and RNA based medicine. We plan to explore commercial stage partnerships with therapeutics companies.

Markets for Our Technology

The initial target market for our instruments and sequencing services has been the life sciences research and development market where we provide solutions for a variety of applications including drug discovery, biomarker discovery and companion diagnostics. This market includes laboratories associated with universities, scientific research centers, and government institutions, and biotechnology and pharmaceutical companies. In the future, we plan to enter the clinical diagnostics sector by partnering with biotech and pharmaceutical companies to develop diagnostic testing products using our technology in order to provide personalized genetic data and analysis to individual consumers.

There are a number of emerging markets for sequencing-based tests, including molecular diagnostics, which 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. 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. As we expand into these emerging markets, the development of our business will be impacted by the variability of the factors affecting the growth of these markets.

The SeqLL technology is tailored for the following applications:

- 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 linear quantitative accuracy in a large scale expression analysis could enable high-throughput screening of promising drug leads. During clinical trials, our technology could potentially be used for companion diagnostics to generate individual gene 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 of order of 100 – 200bp, which carry informative signature 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 reads, SeqLL's single molecule sequencing offers the best suited solution for liquid biopsy.

- Infectious disease: Infectious diseases are disorders caused by bacteria, viruses, and fungi. All of these organisms contain DNA and RNA. The detection and sequencing of the DNA and RNA from pathogens provides medically actionable information for diagnosis, treatment and monitoring of the infections. Accurate sequence information could also help to predict drug resistance.

- Clinical diagnostics: The amplification and ligation free sequencing method allows SeqLL to identify subtle changes in the RNA transcript levels that are undetectable with other methods because of amplification bias and loss of low-level transcripts inherent to the other technologies. The power of 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. SeqLL's 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.

Competition

Given the market opportunity, there are a significant number of competing companies offering DNA sequencing equipment or consumables. These include Illumina, Inc., Pacific Biosciences of California, Inc., Thermo Fisher Scientific, Inc., Qiagen N.V., and Oxford Nanopore Technologies, Ltd. Based on published revenue data, Illumina, Inc. leads the NGS technology with approximately 75% of the market share, followed by Pacific Biosciences of California, Inc. and Oxford Nanopore Technologies, Ltd. We believe that we are uniquely positioned among the competition to be the only company offering the high strand throughput with a 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.

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 breakthroughs in genomic medicine that address the critical concerns involved with today’s personalized medicine.

We generate our revenues through a combination of product sales, fee-for-sequencing 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 sequencing 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.
    - 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 have assembled an experienced management team, board of directors, scientific founders and advisory board who bring industry experience to our Company and business strategy. The members of our team have deep experience in discovering, developing and commercializing with a particular focus on sequencing products and applications.

Marketing, Sales, Service and Support

SeqLL's business model is focused on offering a comprehensive and reliable solution that drives adoption, acceptance, customer loyalty, customer 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 to 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 the additional sales opportunities. In the future, we plan on developing a dedicated sales force comprised of full-time employees complemented by regional sales consultants focused on the NGS market. To accelerate instrument and sequencing services sales, we will seek to build relationships with established sales and marketing organizations around the globe. We will benefit from quick access to large customer bases associated with these organizations while also controlling internal sales costs.

To achieve recurring growth for our service revenues and earn new customers, we are implementing the following initiatives to increase market awareness of the tSMS platform:

1. 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.
2. Updating customer portal to focus on the variety of applications and the solutions model SeqLL provides through sequencing products. The solutions model includes a multi-tiered scope from straight sample sequencing project to a comprehensive application development program. This approach will attract small companies without adequate resources as well as large companies looking for research support.
3. 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.
4. 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 SeqLL platform.
5. Expanding visibility in segment verticals with email campaigns, segment organization participation, and by creating integrated training and education programs as a part of services and instrument sales process.
6. Research collaborations with key opinion leaders (KOLs) to address critical, high potential needs and publish the findings in the peer-reviewed scientific journals.

   SeqLL believes this approach maximizes value to customers and shareholders by supporting the largest possible number of customers in each vertical segment:

   - Those choosing to outsource important aspects of drug research and development
   - Those choosing to outsource until it is financially beneficial to internalize the capability
   - Those requiring access to proven and experienced infrastructure to meet surge or unexpected demand from market influences — direction changes, mergers or acquisition of pipeline candidates.

Customers

Our customer base is focused on academic research, biomarker discovery, and diagnostic product development. These customers over the years have produced scientific achievements through collaborative research efforts.

The versatility of the technology is demonstrated by our broad base of users that currently span research institutions, commercial laboratories, genome centers, clinical laboratories, government and academic institutions, sequencing service providers, and pharmaceutical companies. 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.

Manufacturing

We have the capability to manufacture all sequencing consumables and instrumentation at the SeqLL facility. We believe that by 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 services 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 capacities.

Our current manufacturing staff at SeqLL is comprised of 1 engineer and 2 technicians who each have more than 10 years of experience in the tSMS product line. Although currently small in size, the manufacturing team has tremendous experience in the tSMS platform and has the ability to adapt to future needs on both the hardware and consumable sides. In addition, the group has a wealth of knowledge in FDA product clearance and working in an FDA regulated environment. The team can take credit for having built each commercially available tSMS instrument since its origin in 2006, totaling 27 instruments.

We are planning on establishing a controlled manufacturing process and environment. We plan to implement ISO standards, Five Sigma, and lean techniques. We plan on creating work cells for efficiency and material control for both consumables and instrumentation. Implementation of quality assurance in manufacturing documentation and processes is our top priority as we continue the path towards releasing a clinical grade tSMS sequencer and securing FDA clearance.

The 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 need to lease additional space in the future 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, namely 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 which augments and complements 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 based on image analysis algorithms;
- Co-authored multiple publications in scientific journals; and
- Received multiple NIH 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 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.

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 where we believe such protection will be advantageous. In 2013, as part of the Helicos bankruptcy proceedings, we entered into two non-exclusive license agreements:

License Agreement by and between us and Helicos Biosciences Corporation dated March 15, 2013 ("Helicos License")

We have entered and paid for a non-exclusive, royalty free license agreement to license over 60 patents covering all areas of our technology, including design, methods and chemistry from Helicos. As part of the Helicos bankruptcy proceedings, Fluidigm obtained the rights to this patent portfolio. In the event that we materially default in our performance obligations under the Helicos License, Fluidigm has the right to terminate this license, if the default is not cured subject to certain provisions. This license is provided to us on an "as is" basis only and without any representations or warranty, express or implied, regarding the intellectual property and the use thereof. This patent portfolio is expected to expire 2021 through 2028.

Sub-License Agreement between us and Helicos Biosciences Corporation dated March 15, 2013

As part of the Helicos bankruptcy proceeding, Arizona Science and Technology Enterprises LLC ("AZCT") agreed that Helicos could sub-license the license agreement between Helicos and AZCT to us with respect to 10 patents owned by AZCT for the life of such patents. In the event that we materially default in our performance obligations under this sub-license, AZCT has the right to terminate this license, if the default is not cured subject to certain provisions.

As of November 12, 2018, we own 1 pending U.S. patent application. 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 trademarked the Company name (SeqLL) and design logo, as well as the phrases "tSMS," and "Sequence the Lower Limit." 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 November 12, 2018, we had 8 full-time and 5 part-time 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, Massachusetts 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 biotech corridor 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, Massachusetts 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 as of September 30, 2018:

Name	Age	Position(s)
Executive Officers		
Daniel Jones	38	President, Chief Executive Officer and Director
John W. Kennedy	61	Chief Financial Officer and Secretary
Key Employees		
Erik Volke	38	Director of Operations
Abhijeet Shinde	38	Director of Engineering
Non-Employee Directors		
William C. St. Laurent	54	Chairman and Director
Douglas Miscoll	58	Director
David Pfeffer	59	Director

Executive Officers

Daniel Jones 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. 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 research. Prior to founding SeqLL, 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 their Trilogy 2020 Single Molecule Analyzer and Direct miRNA assays. From December 2002 to December 2003, Mr. Jones worked at EXACT Sciences on their ColoGuard assay, a non-invasive, now FDA-approved molecular diagnostic for colorectal cancer. Mr. Jones has authored or co-authored 4 publications and is named on multiple patents or patent applications. He holds a Bachelor of Science 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. Previously, Mr. Kennedy served as a business consultant to us from February 2017 to August 2018. Mr. Kennedy has 34 years of experience in management, consulting, and investment banking. From January 1994 to July 2018 Mr. Kennedy ran Kennedy Partners Corp., a boutique merchant banking company where he has assisted numerous companies as their investment banker and CFO raising hundreds of millions of growth capital and completing over a dozen mergers & acquisitions, including several years as the FINRA Managing Principal for two US Broker-Dealers of Brazilian banks operating in the US, 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., 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 a FINRA Series 82 license. 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.

Key Employees

Erik Volke has served as our Director of Operations since August 2018 and comes with over 16 years of experience in Manufacturing Engineering, Operations management, Quality Assurance, as well as R&D in the fields of biotechnology, medical device instrumentation and FDA ISO 13485 environments. Prior to joining SeqLL, Erik worked in manufacturing engineering, quality, and production management roles during his time at Affymetrix, Helicos Biosciences, Life Technologies, and T2BioSystems. Starting with the company in 2015 as a Senior Manufacturing Engineer, Mr. Volke has managed hardware and consumable manufacturing, service operations, and facilities at SeqLL. He was also instrumental in the design of the second generation tSMS sequencer. He served as the product quality manager while at T2 BioSystems where Mr. Volke managed product quality and documentation to the FDA clearance of that company product from 2011 to 2015. Prior to T2, he managed a team of instrument and consumable manufacturing technicians at Life Technologies to release an Open Array platform to market from 2010 to 2011 and transitioned the facility to a high-volume site. Mr. Volke worked at Helicos BioSciences from 2007 to 2010 where he managed instrument production and continuous hardware improvement. He has a combined 7 years of experience with SeqLL tSMS working at SeqLL as well as Helicos. Prior to Helicos, his experience includes design transfer from engineering to production and product lifecycle management at Affymetrix from 2002 to 2007. Mr. Volke holds a Bachelor of Science degree in Manufacturing Engineering Technology from Wentworth Institute of Technology, Boston MA, 2002.

Abhijeet Shinde, M.S. has served as our Director of Engineering since June 2014. Mr. Shinde's expertise includes system integration, prototyping, motion control, troubleshooting and diagnosis, FDA design control management, and project management. Prior to joining SeqLL, Mr. Shinde worked as Senior Control Systems Engineer at Ivenix, a medical device company developing smart infusion pump, from 2012 to 2014 where he managed control system algorithm design and development for accurate flow control, fault identification and alarm system. From 2010 to 2012, Mr. Shinde worked as Systems Engineering Manager at Cambridge Endo to develop FDA approved surgical instruments for laparoscopic surgery to provide low cost alternative to expensive surgical robots. Mr. Shinde worked at Helicos Biosciences as a Staff Mechanical Engineer and Senior Engineer from 2006 to 2010 where he led system engineering efforts from concept to commercialization phase of the world's first single molecule sequencer 'Heliscope'. He gained in-depth knowledge of single molecule sequencing instrumentation by developing and servicing a variety of sequencers at Helicos Biosciences. Prior to joining Helicos, from 2004 to 2006 Mr. Shinde designed and prototyped a 6-axis robot for automated repair of thin walled aerospace structures using laser deposition technology at H&R Technologies. Mr. Shinde has authored and co-authored multiple peer-reviewed journal publications in the field of control systems and structural health monitoring. Mr. Shinde holds a Master of Science in Mechanical Engineering from Worcester Polytechnic Institute, MA and a Bachelor of Science in Mechanical Engineering from the University of Pune, India.

Non-Employee Directors

William C. St. Laurent has served as a member of our Board of Directors since our incorporation in 2014 and its Chairman since September 2015. Mr. St. Laurent has over thirty years of experience in leading companies, developing and executing strategy, including building businesses from the ground up. Mr. St. Laurent is currently chief executive officer of St. Laurent Properties, LLC in Orlando, Florida, and Vancouver, Washington; president of Consolidated Forest Products, Inc., in Perry, Florida, American Mulch & Groundcover, LLC in Central Florida and The St. Laurent Institute in Vancouver, Washington, where he is also a co-founder and Board member since 2005. Mr. St. Laurent is also co-founder and the chairman of the board of True Bearing Diagnostics in Washington, D.C., a biotech research company. He is also the founder of St. Laurent Land & Cattle Co., Inc., based in Eagle Point, Oregon, which raises beef with no hormones or antibiotics and has 125 acres of vineyards in development. Mr. St. Laurent serves on the board of People's Bank of Commerce of Oregon. Mr. St. Laurent served as vice chairman of Western Bank from 1989 until the bank sold in 1996. Mr. St. Laurent is heavily involved in community and charitable work and is currently Treasurer for the Florida Lacrosse Association and Braveheart Lacrosse Club, where he occasionally coaches youth lacrosse, as well as a board member for the St. Laurent Family Foundation and the City of Vancouver Aviation Advisory Committee. Mr. St. Laurent earned his Bachelor of Science degree from Cornell University.

We believe Mr. St. Laurent's experience in the industry and executive management experience qualifies him to serve on our board of directors.

Douglas Miscoll has served as a member of our Board of Directors since October 2015. Mr. Miscoll is the Managing Member of Ravello Precision Partners, which was founded in 2015, and manages a hedge fund focused on genomic biology companies. Mr. Miscoll founded Ravello Partners LLC, an affiliate of the Ravello Precision Partners, and a registered investment adviser, in 2010. Ravello Partners currently manages discretionary portfolios for families and small institutions focused on biotechnology and genomic medicine companies. 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 with total assets over $135 million 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 MBA from Georgetown University, a Graduate Certificate from Templeton College, Oxford University, and a BA 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. 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 the EVP and CFO of Oppenheimer Funds, a $250 billion asset manager, since 2004. From 2000 to 2004, Mr. Pfeffer worked as Institutional CFO at Citigroup Asset Management. During 1984 to 2000, Mr. Pfeffer served as CFO and Controller at JP Morgan where he gained significant international experience serving as CFO of JPM Brazil for 5 years in São Paulo and supporting JPM's global business during his 16-year tenure. Since 2009 Mr. Pfeffer has been an Independent Director and the Audit Committee Chairman at ICI Mutual Insurance Co. Mr. Pfeffer is a Certified Public Accountant and 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 currently consists of four members. Upon the closing of this offering, our board of directors will be divided into three classes: Class I (William C. St. Laurent), Class II (David Pfeffer) and Class III (Douglas Miscoll, 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 background, employment and affiliations, including family relationships, our board of directors has determined that each of William St. Laurent, Doug Miscoll and David Pfeffer is 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 has 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. 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 will committee consist of William St. Laurent, who will be the chair of the committee, and Doug Miscoll. 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.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee will consist of Douglas Miscoll, who is the chair of the committee, 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 Advisory Board

Our executive team is supported by our Scientific Advisory Board. The members of our Scientific Advisory Board provide scientific and business strategy advice and support to our executive team. The members of our Scientific Advisory Board are set forth below.

Bradley Bernstein, MD, Ph.D. **—** Professor of Pathology, Harvard Medical School, HHMI Investigator, Sr. Associate Member of the Broad Institute. SeqLL collaborator and co-inventor on patent application describing single molecule ChIP-Seq application on the HeliScope.

Patrice Milos, Ph.D. **—** Healthcare Executive, formerly CEO, Claritas Genomics, formerly CSO, Helicos. Dr. Milos was responsible for scientific strategy and applications development at Helicos from 2007 to 2012. She is a vocal advocate of the technology and advises SeqLL on scientific and business strategy.

Philip Kapranov, Ph.D. **—** Professor and Director, Institute of Genomics at HuaQiao University, Xiamen, China. Former Helicos employee and long-time collaborator of SeqLL, Dr. Kapranov's laboratory purchased the first SeqLL HeliScope in China, which his lab uses for their work on non-coding RNA.

Tim McCaffrey, MD, Ph.D. **—** Professor of Medicine and Director, Division of Genomic Medicine, George Washington University. Dr. McCaffrey is a close collaborator of SeqLL 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 has co-founded a company to commercialize diagnostics based on those discoveries.

Claes Wahlstaedt, MD, Ph.D. — Director, Center for Therapeutic Innovation and Assoc. Dean for Therapeutic Innovation, University of Miami Health System. Dr. Wahlstaedt is an internationally recognized leader in the discovery of novel drug therapies with a long-standing interest in genomics and translational epigenetics. Dr. Wahlstaedt advises SeqLL on applications development and scientific strategy.

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 William St. Laurent serves as Chairman of the board of directors. We currently believe that this leadership structure is in our best interests and strikes an appropriate balance between our Chief Executive Officer's responsibility for the day-to-day management of our company and the Chairman of the board of directors' responsibility to provide oversight. As our founder, Mr. St. Laurent provides a strong link between management and our board of directors, which we believe promotes clear communication and enhances strategic planning and implementation of corporate strategies. Our board has not designated a lead independent director.

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, 2017 and 2016. 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, 2017.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($)	Non-Equity Incentive Plan Compensation ($)	Nonqualified Deferred Compensation Earnings ($)	All Other Compensation ($)[2]	Total ($)
Daniel Jones	2017	140,000	0	0	0	0	0	140,000
Chief Executive Officer[1]	2016	140,000	0	0				140,000
Elizabeth Reczek Former	2017	155,000		0				155,000
Chief Executive Officer[2]	2016	155,000		0				155,000
John W. Kennedy Chief Financial Officer[3]	2017	60,000	0	0	0	0	0	60,000

(1) Mr. Jones became our CEO on May 28, 2018. Prior to May 28, 2018, he was our President.

(2) Ms. Reczek served as our CEO in 2017 and up to May 17, 2018 when she resigned from the Company.

(3) Mr. Kennedy served as a business consultant to us in 2017 and not as our Chief Financial Officer.

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. We are amending and restating our 2014 Plan in connection with this offering. Our board of directors approved the amendment and restatement of our 2014 Plan on September 30, 2018, subject to stockholder approval of the amendment and restatement and effective upon the completion of this offering. Our stockholders are expected to approve the amendment and restatement of our 2014 Plan prior to effectiveness of this registration statement. 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 September 29, 2018, prior to the amendment and restatement of our 2014 Plan in connection with this offering, a total of 2,000,000 shares of our common stock were authorized for issuance under our 2014 Plan. Of those shares, 1,685,000 were subject to outstanding awards, consisting of 1,685,000 shares subject to outstanding stock option awards and shares subject to outstanding restricted stock or restricted stock unit awards, and 315,000 shares remained available for future awards under our 2014 Plan. Following the amendment and restatement of our 2014 Plan, there will be a total of 3,500,000 shares reserved for future awards. 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 pursuant 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, consent form 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 clawback 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.

Director Compensation

We did not provide any compensation to our non-employee directors for their service on our board of directors during 2017 or 2016. Our named executive officers who also served on our board of directors did not receive any additional compensation for their service on our board of directors during 2017 or 2016. For service on our board, beginning September 6, 2018, our non-employee directors initially receive 30,000 stock options and $1,000 per Board meeting as compensation.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information concerning the ownership of our common stock as of September 30, 2018, with respect to: (i) each person, or group of affiliated persons, known to us to be the beneficial owner of more than five percent of our common stock; (ii) each of our directors; (iii) each of our named executive officers; and (iv) all of our current directors and executive officers as a group.

Applicable percentage ownership is based on 17,862,735 shares of common stock outstanding as of September 30, 2018 and reflects the issuance of 5,791,664 shares of common stock issuable upon the conversion of all shares of our outstanding preferred stock immediately prior to our initial public offering. The percentage of beneficial ownership after this offering assumes the sale and issuance of shares of common stock in this offering and no exercise by the underwriters of their option to purchase additional shares of common stock.

We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting or investment power with respect to such securities. In addition, pursuant to such rules, we deemed outstanding shares of common stock subject to options or warrants held by that person that are currently exercisable or exercisable within 60 days of September 30, 2018. We did not deem such shares outstanding, however, for the purpose of computing the percentage ownership of any other person. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the beneficial owners named in the table below have sole voting and investment power with respect to all shares of our common stock that they beneficially own, subject to applicable community property laws.

	Beneficial Ownership Prior to Offering		Beneficial Ownership After the Offering	
Name and Address of Beneficial Owner[1]	Number of Shares	Percentage	Number of Shares	Percentage
5% Stockholders, Executive Officers and Directors				
Daniel Jones[2]	4,708,500	26.35%		%
John W. Kennedy[3]	250,000	1.40%		%
Douglas Miscoll[4]	108,125	*		
William C. St. Laurent[5]	10,707,809	59.94%		
David Pfeffer[6]	30,000	*		
All directors and executive officers as a group (5 persons)	15,804,434	88.48%		%

* Represents beneficial ownership of less than 1%.

(1) Except as otherwise noted below, the address for each person or entity listed is c/o SeqLL Inc., 317 New Boston Street, Suite 210, Woburn, Massachusetts 01801.

(2) Includes 330,000 stock options issued to Mr. Jones pursuant to our 2014 Plan, 180,000 of such shares shall vest upon an issuance of a 409A valuation report and 150,000 of such shares shall vest upon our initial public offering.

(3) Includes 250,000 stock options issued to Mr. Kennedy pursuant to our 2014 Plan, of which 125,000 shall vest upon issuance of a 409A valuation report and 125,000 shall vest upon our initial public offering.

(4) Includes 30,000 stock options issued to Mr. Miscoll upon becoming a member of our Board of Directors, which vest upon issuance of our 409A valuation report.

(5) Includes 1,866,071 shares issued to St. Laurent Investments, LLC and 1,562,500 shares issued to Genomic Diagnostics Technologies, Inc. Mr. William C. St. Laurent is the Managing Partner of St. Laurent Investments, LLC and the majority Owner of Genomic Diagnostics Technologies, Inc. Also, includes 900,000 and 111,964 warrants issued by the Company on September 30, 2018 to St. Laurent Investments, LLC, 9,643 warrants issued to Mr. St. William C. Laurent, individually, and 315,476 shares and warrants issued to William C. St. Laurent Descendants' Trust, and 315,476 shares

and warrants issued to Georges C. St. Laurent III Descendants' Trust. Also, includes 5,596,679 shares owned by Mr. St. Laurent's family members over which Mr. St. Laurent has voting power and control over. Also, includes 30,000 stock options issued to Mr. William C. St. Laurent upon becoming a member of our Board of Directors, which vest upon issuance of our 409A valuation report. The address of St. Laurent Investments, LLC is 120 NE 136 Avenue, Suite 200, Vancouver, WA 98684 and the address of Genomic Diagnostics Technologies, Inc. is 375 Commerce Way, Suite 101, Longwood, FL 32750.

(6) Includes 30,000 stock options issued to Mr. Pfeffer upon becoming a member of our Board of Directors, which vest upon issuance of our 409A valuation report.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

We do not have a formal written policy for the review and approval of transactions with related parties. Our unwritten policy with regard to transactions with related persons is that all material transactions are to be reviewed by the entire Board for any possible conflicts of interest. The Board is responsible for review, approval, or ratification of "related-person transactions" involving the Company and related persons.

With the exception of the transactions set forth below, the Company was not a party to any transaction (in which the amount involved exceeded the lesser of $120,000 or 1% of the average of our assets for the last two fiscal years) in which a director, executive officer, holder of more than five percent of our common stock, or any member of the immediate family of any such person has or will have a direct or indirect material interest and no such transactions are currently proposed.

St. Laurent Realty, Inc.

St. Laurent Realty, Inc. is a related party to William C. St. Laurent, the Chairman of our Board of Directors. William C. St. Laurent, is also the Chief Executive Officer of St. Laurent Realty, Inc. St. Laurent Realty, Inc. and the Company share certain administrative expenses (administrative and accounting services).

For the years ended December 31, 2017 and 2016, the Company incurred expenses payable to St. Laurent Realty, Inc. for services related to clerical and accounting amounting to $363 and $0, respectively.

At December 31, 2017 and 2016, the Company had outstanding payables of $250 and $0 to St. Laurent Realty, Inc.

St. Laurent Institute, Inc.

St. Laurent Institute, Inc. is a related party to William C. St. Laurent, the Chairman of our Board of Directors. William C. St. Laurent, is also the President of St. Laurent Institute, Inc. The Company provides sequencing services to St. Laurent Institute, Inc. in the ordinary course of business.

At December 31, 2017 and 2016, the Company had receivables due from the St. Laurent Institute, Inc. a related party through common ownership, in the amounts of $0 and $46,807, respectively for sequencing services provided to the related party in the ordinary course of business.

For the years ended December 31, 2017 and 2016, the Company had revenues from sales of sequencing kits, sequencing services and equipment sales to the St. Laurent Institute of $25,500 and $75,007, respectively.

For the years ended December 31, 2017 and 2016, the Company incurred expenses payable to the St. Laurent Institute for services related to sequence analysis amounting to $113,954 and $0, respectively. At December 31, 2017 and 2016, the Company had outstanding payables of $113,954 and $0 to the St. Laurent Institute.

St. Laurent Investments, LLC

On March 6, 2018, St. Laurent Investments, LLC loaned the Company $100,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 3,571 shares of common stock.

On March 22, 2018, St. Laurent Investments, LLC loaned the Company $50,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 1,786 shares of common stock.

On April 3, 2018, St. Laurent Investments, LLC loaned the Company $50,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 1,786 shares of common stock.

On May 1, 2018, St. Laurent Investments, LLC loaned the Company $125,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 4,464 shares of common stock.

On May 16, 2018, St. Laurent Investments, LLC loaned the Company $70,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 2,500 shares of common stock.

On May 29, 2018, St. Laurent Investments, LLC loaned the Company $125,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 4,464 shares of common stock.

On June 12, 2018, St. Laurent Investments, LLC loaned the Company $80,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 2,857 shares of common stock.

On June 27, 2018, St. Laurent Investments, LLC loaned the Company $80,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 2,857 shares of common stock.

On July 10, 2018, St. Laurent Investments, LLC loaned the Company $90,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 3,214 shares of common stock.

On July 26, 2018, St. Laurent Investments, LLC loaned the Company $60,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 2,143 shares of common stock.

On September 5, 2018, St. Laurent Investments, LLC loaned the Company $100,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 3,571 shares of common stock.

On September 20, 2018, St. Laurent Investments, LLC loaned the Company $100,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 3,571 shares of common stock.

On September 30, 2018, the Company entered into an Exchange Agreement with St. Laurent Investments, LLC (the “SLT”) to exchange the outstanding the SLT’s promissory notes in the amount of $3,135,000 for (i) 1,866,071 shares of the Company’s Series A-2 Preferred Stock; (ii) warrants equal to 111,964 shares of common stock expiring after September 30, 2023 and at an exercise price of $1.68; (iii) warrants equal to 900,000 shares of common stock expiring after September 30, 2023 and at an exercise price of $1.68 and (iv) a new promissory note in the amount of $360,710 for the accrued interest for the converted SLT notes as of September 30, 2018.

Genomic Diagnostic Technologies, Inc.

On April 11, 2014, the Company issued Genomic Diagnostic Technologies, Inc. (“GDT”) 4,396,500 common shares in exchange for GDT’s interest in SeqLL, LLC.

On May 30, 2014, GDT invested $500,000 for 1,562,500 shares of Series A-1 Preferred Stock.

On January 6, 2015, GDT transferred 2,198,250 shares of common stock to Georges C. St. Laurent III, and another 2,198,250 shares of common stock to Wendy St. Laurent.

St. Laurent Family Investments

On May 30, 2014, Georges C. St. Laurent III invested $10,000 for 31,250 shares of Series A-1 Preferred Stock.

On May 30, 2014, Georges C. St. Laurent Jr. invested $500,000 for 1,562,500 shares of Series A-1 Preferred Stock.

On May 30, 2014, Eleanor St. Laurent invested $100,000 for 312,500 shares of Series A-1 Preferred Stock.

William C. St. Laurent Descendants Trust

On February 19, 2016, William C. St. Laurent Descendants Trust invested $500,000 for 297,619 shares of Series A-2 Preferred Stock.

Georges C. St. Laurent III Descendants Trust

On February 19, 2016, Georges C. St. Laurent III Descendants Trust invested $500,000 for 297,619 shares of Series A-2 Preferred Stock.

Georges C. St. Laurent Trust UAB

On September 12, 2016, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $500,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 17,857 shares of common stock.

On September 14, 2016, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $500,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 17,857 shares of common stock.

On January 25, 2017, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $225,000 in one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 8,036 shares of common stock.

On January 30, 2017, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $25,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 893 shares of common stock.

On February 24, 2017, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $250,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 8,929 shares of common stock.

On May 4, 2017, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $200,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 7,142 shares of common stock.

On June 14, 2017, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $70,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 2,500 shares of common stock.

On October 13, 2017, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $1,000,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 35,714 shares of common stock.

On November 28, 2017, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $100,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 3,571 shares of common stock.

On December 12, 2017, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $100,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 3,571 shares of common stock.

On January 9, 2018, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $200,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 7,143 shares of common stock.

On February 6, 2018, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $100,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 3,571 shares of common stock.

On March 19, 2018, Georges C. St. Laurent Trust UAB (transferred to St. Laurent Investments, LLC on March 21, 2018) loaned the Company $105,000 in a one-year convertible promissory note yielding 10% per annum and was issued a warrant to purchase 3,750 shares of common stock.

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 automatic conversion of all of our outstanding preferred stock into common stock in connection with this offering, there are 14,791,664 shares of common stock issued and outstanding and there were 20 holders of record of our common stock, 1,071,070 shares of common stock issuable upon exercise of outstanding warrants, and 1,685,000 shares of common stock issuable upon exercise of outstanding stock options.

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 3,125,000 shares of common stock immediately prior to the closing of this offering, and 2,666,664 outstanding shares of Series A-2 preferred stock, which will be converted into 2,666,664 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;
- 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 September 30, 2018, we had outstanding options to purchase an aggregate 1,685,000 shares of our common stock, with a weighted-average exercise price of $0.71 per share all of which are issued under the 2014 Plan.

Warrants

On February 19, 2016, we issued a warrant to purchase up to 17,857 shares of our common stock to William C. St. Laurent Descendants Trust at an exercise price of $1.68 per share, which is exercisable until February 19, 2021. In addition, on February 19, 2016, we issued a warrant to purchase up to 17,857 shares of our common stock to Georges C. St. Laurent III Descendants Trust at an exercise price of $1.68 per share, which is exercisable through February 19, 2021

On March 25, 2016, we issued a warrant to purchase up to 2,678 shares of our common stock to Templeside Holdings Ltd. at an exercise price of $1.68 per share, which is exercisable through March 25, 2021. In addition, on March 25, 2016, we issued a warrant to purchase up to 5,357 shares of our common stock to Tara Partners Fund LLC at an exercise price of $1.68 per share, which is exercisable through March 25, 2021.

On September 12, 2016, we issued a warrant to purchase up to 17,857 shares of our common stock to the Georges C. St. Laurent Trust, which is exercisable through September 12, 2021. On September 14, 2016, we issued a warrant to purchase up to 17,857 shares of our common stock to the Georges C. St. Laurent Trust, which is exercisable through September 14, 2021.

On January 27, 2017, we issued a warrant to purchase up to 8,035 shares of our common stock to the Georges C. St. Laurent Trust, which is exercisable through January 27, 2022. On February 22, 2017, we issued a warrant to purchase up to 892 shares of our common stock to the Georges C. St. Laurent Trust, which is exercisable through February 22, 2022. On February 27, 2017, we issued a warrant to purchase up to 8,928 shares of our common stock to the Georges C. St. Laurent Trust, which is exercisable through February 27, 2022. On May 4, 2017, we issued a warrant to purchase up to 7,142 shares of our common stock to William C. St. Laurent, which warrants are exercisable through May 4, 2022. On June 14, 2017, we issued a warrant to purchase up to 2,500 shares of our common stock to William C. St. Laurent, which warrants are exercisable through June 14, 2022. On November 27, 2017, we issued a warrant to purchase up to 3,571 shares of our common stock to the Georges C. St. Laurent Trust, which is exercisable through November 27, 2022, and on December 13, 2017, we issued a warrant to purchase up to 3,571 shares of our common stock to the Georges C. St. Laurent Trust, which is exercisable through December 13, 2022.

From January 9, 2018 to September 19, 2018 we received proceeds aggregating $1,435,000 pursuant to the issuance of convertible promissory notes (the “Notes”), and five-year warrants for the purchase of 51,250 shares of our common stock (the “Warrants”). The Notes bear interest at 10% per annum. On September 30, 2018, the Notes along with all outstanding prior senior convertible notes from the same lender totaling $3,135,000 were exchanged for (i) 1,866,071 shares of Series A-2 Preferred Stock; (ii) a warrant for 900,000 shares of common stock exercisable at $1.68 per share, which is exercisable through

September 30, 2023; (iii) a warrant for 111,964 shares of common stock exercisable at $1.68 per share, which is exercisable through September 30, 2023 and (iv) a 1-year promissory note bearing 10% interest per annum and payable in cash upon a public offering in the amount of $360,710 for the accrued interest under the Notes as of September 30, 2018.

On July 27, 2018, we issued a warrant to purchase up to 5,714 shares of our common stock to Terranova Capital Partners, Inc. at an exercise price of $1.68 per share, which is exercisable through July 27, 2023.

Underwriters' Warrants

We are registering the offer and sale of Underwriters' Warrants (and the underlying shares of common stock) to purchase up to a total of shares of our common stock. See "Underwriting" beginning on page 92 for a description of the Underwriters' Warrants.

Registration Rights

Demand Registration Rights

Pursuant to our amended and restated investors' rights agreement, beginning 180 days after of our initial public offering and 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 the 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.

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 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.

Piggyback Registration Rights

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.

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 ⅔% 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 eliminate the right of 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 served 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: (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; (4) any action to interpret, apply, enforce or determine the validity of our amended and restated certificate of incorporation or amended and restated bylaws; or (5) 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 a majority 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 individual to serve as directors.

Exchange Listing

We intend to apply to list our common stock on the Nasdaq Capital Market under the trading symbol “SQL.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is VStock Transfer, LLC. The transfer agent and registrar’s address is 18 Lafayette Place, Woodmere, NY 11598.

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 shares of common stock outstanding based upon 14,791,664 shares outstanding as of the date of this prospectus, assuming an initial public offering price of $ per share and assuming no exercise by the underwriters' option to purchase additional shares of common stock, and no exercise or conversion of outstanding options, Warrants or Notes 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

We and all of our executive officers, directors and other certain holders 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, 7,649,994 common stock shares will be eligible for sale in the public market upon expiration of lock-up agreements 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. 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 shares immediately after this offering (assuming no exercise of the underwriters' option to purchase additional shares and no exercise or conversion of outstanding options, Notes or 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 Amended 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 Warrants, and Underwriters' Warrants may convert and exercise their security instrument 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.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF OUR COMMON STOCK

The following is a summary of the material U.S. federal income tax consequences of the ownership and disposition of our common stock acquired in this offering by a "non-U.S. holder" (as defined below), but does not purport to be a complete analysis of all the potential tax considerations relating thereto. This summary is based upon the provisions of the United States Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, administrative rulings and judicial decisions, all as of the date hereof. These authorities may be changed, possibly retroactively, so as to result in U.S. federal income tax consequences different from those set forth below. We have not sought, and do not intend to seek, any ruling from the Internal Revenue Service, or IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS or a court will agree with such statements and conclusions.

This summary also does not address the tax considerations arising under the laws of any non-U.S., state or local jurisdiction or under U.S. federal gift and estate tax rules, except to the limited extent set forth below. In addition, this discussion does not address tax considerations applicable to an investor's particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

- banks, insurance companies, regulated investment companies, real estate investment trusts or other financial institutions;
- persons subject to the alternative minimum tax or the tax on net investment income;
- tax-exempt organizations;
- pension plans and tax-qualified retirement plans;
- controlled foreign corporations, passive foreign investment companies and corporations that accumulate earnings to avoid U.S. federal income tax;
- brokers or dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than five percent of our capital stock (except to the extent specifically set forth below);
- certain former citizens or long-term residents of the United States;
- persons who hold our common stock as a position in a hedging transaction, "straddle," "conversion transaction" or other risk reduction transaction;
- persons who do not hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment); or
- persons deemed to sell our common stock under the constructive sale provisions of the Code.

In addition, if a partnership, entity or arrangement classified as a partnership or flow-through entity for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner generally will depend on the status of the partner and upon the activities of the partnership or other entity. A partner in a partnership or other such entity that will hold our common stock should consult his, her or its own tax advisor regarding the tax consequences of the ownership and disposition of our common stock through a partnership or other such entity, as applicable.

You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our common stock arising under the U.S. federal gift or estate tax rules or under the laws of any state, local, non-U.S. or other taxing jurisdiction or under any applicable tax treaty.

Non-U.S. Holder Defined

For purposes of this discussion, you are a "non-U.S. holder" if you are a beneficial owner of our common stock that, for U.S. federal income tax purposes, is not a partnership or:

- an individual who is a citizen or resident of the United States;
- a corporation or other entity taxable as a corporation created or organized in the United States or under the laws of the United States or any political subdivision thereof, or otherwise treated as such for U.S. federal income tax purposes;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust (1) whose administration is subject to the primary supervision of a U.S. court and that has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (2) that has made a valid election under applicable Treasury Regulations to be treated as a U.S. person.

If you are an individual, you are a resident alien if you are a lawful permanent resident of the U.S. (e.g., a green card holder) and you may, in many cases, be deemed to be a resident alien, as opposed to a nonresident alien, by virtue of being present in the U.S. for at least 31 days in the calendar year and for an aggregate of at least 183 days during a three-year period ending in and including the current calendar year. For these purposes, all the days present in the U.S. in the current year, one-third of the days present in the immediately preceding year, and one-sixth of the days present in the second preceding year are counted. Resident aliens are subject to U.S. federal income tax as if they are U.S. citizens. Such an individual is urged to consult his or her own tax advisor regarding the U.S. federal income tax consequences of the purchase, ownership or disposition of our common stock

Distributions

As described in the section of this prospectus titled "Dividend Policy," we have never declared or paid cash dividends on our common stock, and we do not anticipate paying any dividends on our common stock following the completion of this offering. However, if we do make distributions on our common stock, those payments will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed both our current and our accumulated earnings and profits, the excess will constitute a return of capital and will first reduce your basis in our common stock, but not below zero, and then will be treated as gain from the sale of stock. See "— Gain on Disposition of Common Stock."

Subject to the discussions below on effectively connected income and Foreign Account Tax Compliance Act, or FATCA, withholding, any dividend paid to you generally will be subject to U.S. federal withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty between the United States and your country of residence. In order to receive a reduced treaty rate, you must provide the applicable withholding agent with an IRS Form W-8BEN or W-8BEN-E or other appropriate version of IRS Form W-8 certifying qualification for the reduced rate. A non-U.S. holder of shares of our common stock eligible for a reduced rate of U.S. federal withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS. If the non-U.S. holder holds our common stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to the applicable withholding agent, either directly or through other intermediaries.

Dividends received by you that are treated as effectively connected with your conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, such dividends are attributable to a permanent establishment or fixed base maintained by you in the United States) are generally exempt from the 30% U.S. federal withholding tax, subject to the discussion below on backup withholding and FATCA withholding. In order to obtain this exemption, you must provide the applicable withholding agent with a properly executed IRS Form W-8ECI or other applicable IRS Form W-8properly certifying such exemption. Such effectively connected dividends, although not subject to U.S. federal withholding tax, are taxed at the same graduated rates applicable to U.S. persons, net of certain deductions and credits, subject to an applicable

income tax treaty providing otherwise. In addition, if you are a corporate non-U.S. holder, dividends you receive that are effectively connected with your conduct of a U.S. trade or business may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty between the United States and your country of residence. You should consult your tax advisor regarding the tax consequences of the ownership and disposition of our common stock, including any applicable tax treaties that may provide for different rules.

Gain on Disposition of Common Stock

Subject to the discussion below regarding backup withholding and FATCA withholding, you generally will not be required to pay U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock unless:

- the gain is effectively connected with your conduct of a U.S. trade or business (and, if an applicable income tax treaty so provides, the gain is attributable to a permanent establishment or fixed base maintained by you in the United States);
- you are an individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met; or
- our common stock constitutes a United States real property interest by reason of our status as a "United States real property holding corporation," or USRPHC, for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding your disposition of, or your holding period for, our common stock.

We believe that we are not currently and will not become a USRPHC for U.S. federal income tax purposes, and the remainder of this discussion so assumes. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our U.S. and worldwide real property interests plus our other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we become a USRPHC, however, as long as our common stock is regularly traded on an established securities market, your common stock will be treated as U.S. real property interests only if you actually (directly or indirectly) or constructively hold more than five percent of such regularly traded common stock at any time during the shorter of the five-year period preceding your disposition of, or your holding period for, our common stock.

If you are a non-U.S. holder described in the first bullet above, you will be required to pay tax on the gain derived from the sale (net of certain deductions and credits) under regular graduated U.S. federal income tax rates, and a corporate non-U.S. holder described in the first bullet above also may be subject to the branch profits tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty. If you are an individual non-U.S. holder described in the second bullet above, you will be subject to tax at 30% (or such lower rate specified by an applicable income tax treaty) on the gain derived from the sale, which gain may be offset by U.S. source capital losses for the year, provided you have timely filed U.S. federal income tax returns with respect to such losses. You should consult your tax advisor regarding any applicable income tax or other treaties that may provide for different rules.

Federal Estate Tax

Our common stock beneficially owned by an individual who is not a citizen or resident of the United States (as defined for U.S. federal estate tax purposes) at the time of his or her death will generally be includable in the decedent's gross estate for U.S. federal estate tax purposes. Such stock, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax treaty provides otherwise.

Backup Withholding and Information Reporting

Generally, we must report annually to the IRS the amount of dividends paid to you, your name and address, and the amount of tax withheld, if any. A similar report will be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence.

Payments of dividends on or of proceeds from the disposition of our common stock made to you may be subject to information reporting and backup withholding at a current rate of 24% unless you establish an exemption, for example, by properly certifying your non-U.S. status on a properly completed IRS Form W-8BEN or W-8BEN-E or another appropriate version of IRS Form W-8. Notwithstanding the foregoing, backup withholding and information reporting may apply if the applicable withholding agent has actual knowledge, or reason to know, that you are a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance Act (FATCA)

Provisions of the Code commonly referred to as FATCA, Treasury Regulations issued thereunder and official IRS guidance generally impose a U.S. federal withholding tax of 30% on dividends on, and the gross proceeds from a sale or other disposition of our common stock, paid to a "foreign financial institution" (as specially defined under these rules), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding the U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or otherwise establishes an exemption. FATCA also generally imposes a U.S. federal withholding tax of 30% on dividends on, and the gross proceeds from, a sale or other disposition of our common stock paid to a "non-financial foreign entity" (as specially defined under these rules), unless such entity provides the withholding agent with a certification identifying the substantial direct and indirect U.S. owners of the entity, certifies that it does not have any substantial U.S. owners, or otherwise establishes an exemption.

The withholding obligations under FATCA generally apply to dividends on our common stock and under current transition rules are expected to apply to the payment of gross proceeds of a sale or other disposition of our common stock made on or after January 1, 2019. The withholding tax will apply regardless of whether the payment otherwise would be exempt from U.S. nonresident and backup withholding tax, including under the other exemptions described above. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. Prospective investors are encouraged to consult with their own tax advisors regarding the application of FATCA withholding to their investment in, and ownership and disposition of, our common stock.

The preceding discussion of U.S. federal tax considerations is for general information only. It is not tax advice to investors in their particular circumstances. Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed change in applicable laws.

UNDERWRITING

WallachBeth Capital, LLC is acting as representative of the several underwriters of the offering, and we have entered into an underwriting agreement on the date of this prospectus, with them as 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 share less the underwriting discounts set forth on the cover page of this prospectus.

Name	Number of Shares
WallachBeth Capital, LLC	
Total	

The underwriting agreement provides that the underwriters are obligated to purchase all the shares of common stock in the offering if any are purchased, other than those shares 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.

We have granted to the underwriters a 45-day option to purchase on a pro rata basis up to additional shares (15% of the shares of common stock 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.

The underwriters are offering the shares, 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 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 shares by the underwriters is also subject to the underwriters' right to reject any order in whole or in part.

The underwriters propose to offer the shares of common stock 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 share equal to 9% of the public offering price. The underwriters and selling group members may allow a discount of $ per share 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 Share	Total Without Over-Allotment Option	Total With Over-Allotment Option
Public offering price	$	$	$
Underwriting discount (9%)	$	$	$
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 $. 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(f)(2)(C).

Upon the closing of this offering, we will grant to WallachBeth Capital, LLC the right of first negotiation to co-manage any public underwriting or private placement of debt or equity securities (excluding (i) shares issued under any compensation or stock option plan approved by the stockholders of our company, (ii) shares issued in payment of the consideration for an acquisition or as part of strategic partnerships and transactions and (iii) conventional banking arrangements and commercial debt financing) of our company or any subsidiary or successor of our company, with the underwriters receiving the right to underwrite or place a number of the securities to be sold therein having an aggregate purchase price therein equal to a minimum of the aggregate purchase price of the shares offered by us in this offering (excluding any shares that we may sell to the underwriters to cover over-allotments), until twelve months after completion of this offering.

We have agreed to pay the underwriters' non-accountable expenses allowance equal to 1% of the gross proceeds of the public offering of the shares (including shares that we may sell to the underwriters to cover over-allotments). 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 up to an amount of $75,000 (which maximum shall apply solely to such fees and disbursements of counsel and not to other accountable fees and expenses), 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 agreed to issue to the underwriters the Underwriters' Warrants exercisable for shares of common stock (5% of the shares of common stock sold in the offering) 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 $, which equals 125% 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. The Underwriters' Warrants may not be transferred, assigned, sold or hypothecated nor will the underwriters be able to engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the underwriters' warrants or the common stock underlying the Underwriters' Warrants for a period of six months after the effective date except to officers, partners or registered representatives of the underwriter as permitted by FINRA or to dealers participating in the offering, all in accordance with Rule 5110(g)(1) of FINRA. The Underwriters' Warrants and shares of common stock underlying the Underwriters' Warrants are deemed compensation by FINRA. The terms and number of shares underlying the Underwriters' Warrants shall be modified if necessary to comply with FINRA rules or regulations. 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.

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.

All of our executive officers, directors and other certain holders of our capital stock and securities convertible into or exchangeable for our capital 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.

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be negotiated between us and the representatives. In determining the initial public offering price of our common stock, 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 intend to apply to list the shares of our common stock on the Nasdaq Capital Market under the symbol “SQL.”

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.

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.

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.

LEGAL MATTERS

Certain legal matters with respect to the shares of common stock offered hereby will be passed upon by Foley & Lardner LLP, Jacksonville, Florida. Certain other legal matters will be passed upon for the underwriters by Carmel, Milazzo & DiChiara LLP, New York, New York.

EXPERTS

The financial statements of SeqLL Inc. as of December 31, 2017 and 2016 and for each of 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 financial statements are included in this prospectus and registration statement in reliance upon the report (which report includes an explanatory paragraph relating to our ability to continue as a going concern) of Wolf & Company, P.C., 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 common stock 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 are 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.

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Report of Independent Registered Public Accounting Firm

To the Board of Directors 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, 2017 and 2016, and the related consolidated statements of operations, changes in stockholders' deficit and cash flows for the years then ended, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, 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 Matter

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has recurring losses from operations which raises substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters 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 the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Wolf & Company, P.C

Wolf & Company, P.C.

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

Boston, Massachusetts
November 16, 2018

SeqLL Inc.
Consolidated Balance Sheets
December 31, 2017 and 2016

	2017	2016
Assets		
Current Assets		
Cash and cash equivalents	$ 30,058	$ 207,253
Accounts receivable		
Customers	44,910	199,967
Related party	—	46,807
Inventory	783,573	1,134,951
Prepaid expenses	2,438	5,147
Total current assets	860,979	1,594,125
Other assets		
Property and equipment, net	189,971	251,526
Other assets	28,565	21,989
Total assets	**$ 1,079,515**	**$ 1,867,640**
Liabilities and Stockholders' Deficit		
Current liabilities		
Accounts payable	$ 100,647	$ 167,799
Accounts payable – related parties	114,204	—
Accrued expenses	239,371	122,552
Deferred revenue	82,245	394,053
Notes payable	287,439	—
Convertible promissory notes	1,970,000	1,000,000
Deferred rent	31,518	37,732
Total current liabilities	2,825,424	1,722,136
Non-current liabilities		
Liability related to warrants	8,474	6,018
Notes payable, long term	—	297,956
Total non-current liabilities	8,474	303,974
Total liabilities	**2,833,898**	**2,026,110**
Commitments and contingencies		
Stockholders' deficit		
Preferred stock, $0.00001 par value; 4,125,000 and 3,125,000 shares authorized at December 31, 2017 and 2016; 3,854,165 shares issued and outstanding at December 31, 2017 and 2016	38	38
Common stock, $0.00001 par value; 15,071,428 shares authorized at December 31, 2017 and 2016; 9,000,000 shares issued and outstanding at December 31, 2017 and 2016	90	90
Additional paid-in capital	2,548,863	2,437,842
Accumulated deficit	(4,303,374)	(2,596,440)
Total stockholders' deficit	(1,754,383)	(158,470)
Total liabilities and stockholders' deficit	**$ 1,079,515**	**$ 1,867,640**

See report of independent registered public accounting firm and the accompanying notes to these consolidated financial statements

SeqLL Inc.
Consolidated Statements of Operations

	Years Ended December 31,	
	2017	**2016**
Revenue		
Sales	$ 1,138,052	$ 811,743
Other revenue	200,700	127,939
Total revenue	1,338,752	939,682
Cost of sales	1,084,518	520,095
Gross profit	**254,234**	**419,587**
Operating expenses		
Research and development	974,531	1,113,829
General and administrative	806,897	690,982
Total operating expenses	1,781,428	1,804,811
Operating loss	**(1,527,194)**	**(1,385,224)**
Other income and expenses		
Other income	—	1,614
Interest and other expenses	(179,740)	(50,740)
Total other expenses, net	(179,740)	(49,126)
Net Loss	**(1,706,934)**	**(1,434,350)**
Net loss per share – basic and diluted	**$ (0.19)**	**$ (0.16)**
Weighted average common shares – basic and diluted	**9,000,000**	**9,000,000**

See report of independent registered public accounting firm and the accompanying notes to these consolidated financial statements

SeqLL Inc.
Consolidated Statements of Stockholders' Deficit
For the Years Ended December 31, 2017 and 2016

	Preferred stock		Common stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount			
Balance as of December 31, 2015	**3,125,000**	**$31**	**9,000,000**	**$90**	**$1,124,405**	**$ (1,162,090)**	**$ (37,564)**
Issuance of preferred stock in private placement	729,165	7	—	—	1,224,990	—	**1,224,997**
Stock-based compensation	—	—	—	—	88,447	—	**88,447**
Net loss	—	—	—	—	—	(1,434,350)	**(1,434,350)**
Balance as of December 31, 2016	**3,854,165**	**38**	**9,000,000**	**90**	**2,437,842**	**(2,596,440)**	**(158,470)**
Stock-based compensation	—	—	—	—	111,021	—	**111,021**
Net loss	—	—	—	—	—	(1,706,934)	**(1,706,934)**
Balance as of December 31, 2017	**3,854,165**	**$38**	**9,000,000**	**$90**	**$2,548,863**	**$ (4,303,374)**	**$(1,754,383)**

See report of independent registered public accounting firm and the accompanying notes to these consolidated financial statements

SeqLL Inc.
Consolidated Statements of Cash Flows

	Years Ended December 31,	
	2017	**2016**
Cash Flows from Operating Activities		
Net loss	$(1,706,934)	$(1,434,350)
Adjustment to reconcile net loss to net cash used in operating activities:		
Depreciation	72,636	48,862
Stock-based compensation	111,021	88,447
Issuance of derivative warrants	2,456	6,018
Changes in operating assets and liabilities:		
Accounts receivable – customers	155,057	(128,472)
Accounts receivable – related party	46,807	(30,738)
Prepaid expenses	2,709	(26)
Inventory	351,378	(781,434)
Other assets	(6,576)	(5,284)
Accounts payable and accrued expenses	49,667	81,342
Accounts payable – related parties	114,204	—
Deferred revenue	(311,808)	(2,802)
Deferred rent	(6,214)	8,013
Net cash used in operating activities	(1,125,597)	(2,150,424)
Cash Flows from Investing Activities		
Purchase of property and equipment	(11,081)	(110,474)
Net cash used in investing activities	(11,081)	(110,474)
Cash Flows from Financing Activities		
Payments of convertible promissory notes	1,979,315	1,000,000
Payment of convertible promissory notes	(1,009,315)	—
Payment of notes payable	(10,517)	(57,687)
Proceeds from issuance of preferred stock	—	1,224,997
Net cash provided by financing activities	959,483	2,167,310
Net decrease in cash	(177,195)	(93,588)
Cash, beginning of year	207,253	300,841
Cash, end of year	**$ 30,058**	**$ 207,253**

See report of independent registered public accounting firm and the accompanying notes to these consolidated financial statements

SeqLL Inc.

Notes to Consolidated Financial Statements
December 31, 2017 and 2016

Note 1 — General

SeqLL Inc. (the "Company" or "SeqLL") was incorporated as a Delaware corporation on April 3, 2014 ("Inception). 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.

SeqLL acquired its 100% ownership interest in the Subsidiary through a Contribution Agreement (the "Agreement") with Genomic Diagnostic Technologies, LLC and an individual (collectively, the "Contributors"). The Contributors held the equity interests of the Subsidiary, with Genomic Diagnostic Technologies, LLC and the individual holding equity interests of 50.1% and 49.9%, respectively. The Contributors provided their respective equity interest in the Subsidiary to SeqLL pursuant to the terms of the Agreement in exchange for a proportionate number of shares of common stock of SeqLL. The common stock issued under the Agreement amounted to 9,000,000 shares.

On May 30, 2014, SeqLL issued 3,125,000 shares of Series A-1 Convertible Preferred Stock at a stated price of $0.32 per share, resulting in proceeds of $1,000,000.

On March 25, 2016, SeqLL issued 729,165 shares of Series A-2 Convertible Preferred Stock and 43,749 warrants to purchase one share of common stock for $1.68 per share, resulting in proceeds of $1,224,997.

Since its inception, the Company has devoted substantially most of its effort to business planning, and research and development. The Company has incurred net losses of $1,706,934 and $1,434,350 and had negative cash flow from operating activities of $1,125,597 and $2,150,424 for the years ended December 31, 2017 and 2016, respectively, and had an accumulated deficit of $4,303,374 as of December 31, 2017. These conditions among others raise substantial doubts about the Company's ability to continue as a going concern. The Company's ability to continue to operate is dependent upon raising additional funds to finance its activities. There is an unwritten commitment from the Company's primary investor to continue funding ongoing operations as they have in the past since the Company's founding in 2013. However, if the Company is not successful in securing additional outside financing, there are no assurances that the investor will continue to fund the Company to an adequate level of financing needed for the long-term development and commercialization of its products.

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. The Company management and the Board of Directors believe that the Company's existing financial resources are adequate to satisfy its expected liquidity requirements through the end of December 2018.

Note 2 — Summary of Significant Accounting Policies

The significant accounting policies applied in the annual consolidated financial statements of the Company as of December 31, 2017 and 2016 are applied consistently in these consolidated financial statements.

Basis of Presentation

The accompanying consolidated financial statements as of December 31, 2017 and 2016, respectively, have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") The 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.

SeqLL Inc.

Notes to Consolidated Financial Statements
December 31, 2017 and 2016

Note 2 — Summary of Significant Accounting Policies (Continued)

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. Actual results could differ from those estimates.

Management makes estimates that affect certain accounts including inventory, deferred income tax assets, accrued expenses, fair value of equity and derivative instruments and reserves for any other commitments or contingencies. Any adjustments applied to estimates are recognized in the period in which such adjustments are determined.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents. The Company had no cash equivalents at December 31, 2017 and 2016.

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. There were no doubtful accounts as of December 31, 2017 and 2016.

Inventory

Inventory consists of finished goods, work-in-process and raw materials and is valued at the lower of cost or market, 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. On an annual basis, 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 records a reserve for excess and obsolete inventories to reduce the carrying value of inventories. Inventory balance consisted of the following at December 31, 2017 and 2016:

	December 31, 2017	December 31, 2016
Raw Materials	$ 60,518	$ 96,180
Work in Process	$281,851	$ 259,106
Finished Goods	441,204	779,665
Total Inventory	$783,573	$1,134,951

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.

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

Note 2 — Summary of Significant Accounting Policies (Continued)

comparison of the carrying amount of an asset to 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 impairment was recognized during the periods ending December 31, 2017 and 2016.

Deferred Rent Liability

The Company's office lease agreement is subject to scheduled escalations in rent throughout its term. Accordingly, the Company recorded the related rent expense on a straight-line basis that resulted in a deferred rent liability of $31,518 and $37,732 on December 31, 2017 and 2016, respectively.

Revenue Recognition

Revenue from genetic sequencing services and equipment sales are recognized when there is persuasive evidence of an arrangement, service has been rendered or product has been delivered, the sales price is determinable, and collectability is reasonably assured. Service is deemed to be rendered when the results have been reported to the customer who ordered the sequencing. To the extent that sequencing services have been prepaid, but results have not yet been reported, recognition of all related revenue is deferred until results are reported.

Grants Revenue

The Subsidiary receives government research grants that provide reimbursement payments for work performed under multiple sequencing projects. Grants revenue is recognized when the related expenses are incurred. The Subsidiary is subject to independent verification of expenditures and research results under the contract terms. In the years ended December 31, 2017 and 2016, the Company earned grant revenue of $200,700 and $127,939, respectively.

Stock-based Compensation

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

For awards granted to consultants and non-employees, compensation expense is recognized over the vesting period of the awards, which is generally the period during which services are rendered by such consultants and non-employees.

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.

Fair Value Measurements

Financial Accounting Standards Board ("FASB") Accounting Standards Codification "ASC 820", Fair Value Measurements and Disclosures, (FASB ASC 820), defines fair value, and establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives

Note 2 — Summary of Significant Accounting Policies (Continued)

the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

Level 1: Quoted prices for identical assets and liabilities traded in active exchange markets, such as the New York Stock Exchange.

Level 2: Observable inputs other than Level 1 including quoted prices for similar assets or liabilities, quoted prices in less active markets, or other observable inputs that can be corroborated by observable market data. Level 2 also includes derivative contracts whose value is determined using a pricing model with observable market inputs or can be derived principally from or corroborated by observable market data.

Level 3: Unobservable inputs supported by little or no market activity for financial instruments whose value is determined using pricing models, discounted cash flows methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgement or estimation; also includes observable inputs for non-binding single dealer quotes not corroborated by observable market data.

Fair value is a market-based measure considered form the perspective of the market participant rather than an entity-specific measure. Therefore, even when market assumptions are not readily available, the Company's own assumptions are set to reflect those that market participants would use in pricing the asset or liability at the measurement date.

The only assets or liabilities measured at fair value on a recurring basis are the derivative warrants, which represent Level 3 liabilities.

The following tables present information about the Company's financial assets that have been measured at fair value as of December 31, 2017 and 2016:

	Warrant Liability
Total warrant liability at December 31, 2015	$ —
Warrants to purchase 79,463 shares issued	6,018
Adjustment to record warrants at fair value	—
Total warrant liability at December 31, 2016	$6,018
Warrants to purchase an additional 34,639 shares issued	2,456
Adjustment to record warrants at fair value	—
Total warrant liability at December 31, 2017	$8,474

Financial instruments, including receivables, accounts payable and accrued liabilities are carried at cost, which we believe approximates fair value due to the short-term nature of these instruments. Our warrant liabilities are classified within level 3 of the fair value hierarchy because the value is calculated using significant judgment based on our own assumptions in the valuation of these liabilities.

Earnings per Share

The Company has adopted ASC 260, "Earnings Per Share" ("EPS") which requires presentation of basic and diluted EPS on the face of the income statement for all entities with complex capital structures and requires a reconciliation of the numerator and denominator of the basic EPS computation to the numerator and denominator of the diluted EPS computation. In the accompanying financial statements, basic and diluted net loss per common share is computed by dividing net loss in each period by the

Note 2 — Summary of Significant Accounting Policies (Continued)

weighted average number of shares of common stock outstanding during such period. For the periods presented, common stock equivalents, consisting of options, convertible preferred stock and warrants, were not included in the calculation of the diluted loss per share because to do so would be anti-dilutive.

Segments

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

Recent Accounting Pronouncements

In June 2018, Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-07, Compensation — Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting. ASU 2018-07 expands the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. An entity should apply the requirements of Topic 718 to nonemployees awards except for specific guidance on inputs to an option pricing model and the attribution of cost. ASU 2018-07 specifies that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards, and that Topic 718 does not apply to share-based payments used to effectively provide (1) financing to the issuer or (2) awards granted in conjunction with selling goods or services to customers as part of a contract accounted for under Topic 606 Revenue from Contracts with Customers. The Company is currently evaluating the impact of adopting this guidance.

In January 2017, FASB issued ASU No. 2017-01, Clarifying the Definition of a Business ("ASU 2017-01"). The standard clarifies the definition of a business by adding guidance to assist entities in evaluating whether transactions should be accounted for as acquisitions of assets or businesses. ASU 2017-01 is effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Under ASU 2017-01, to be considered a business, the assets in the transaction need to include an input and a substantive process that together significantly contribute to the ability to create outputs. Prior to the adoption of the new guidance, an acquisition or disposition would be considered a business if there were inputs, as well as processes that when applied to those inputs had the ability to create outputs. Early adoption is permitted for certain transactions. Adoption of ASU 2017-01 may have a material impact on the Company's consolidated financial statements if it enters into future business combinations.

In August 2016, FASB issued ASU No. 2016-15, Classification of Certain Cash Receipts and Cash Payments (a consensus of the Emerging Issues Task Force) ("ASU 2016-15"). The amendments in ASU 2016-15 address eight specific cash flow issues and apply to all entities that are required to present a statement of cash flows under ASC Topic 230, Statement of Cash Flows. The amendments in ASU 2016-15 are effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted, including adoption during an interim period. Adoption of ASU 2016-15 will not have a material impact on the Company's consolidated financial statements.

In March 2016, FASB issued ASU No. 2016-09, Improvements to Employee Share-Based Payment Accounting ("ASU 2016-09"). ASU 2016-09 simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Early adoption of ASU 2016-09 did not have a material impact on the Company's consolidated financial statements.

In February 2016, FASB issued ASU No. 2016-02, Leases (Topic 842) ("ASU 2016-02"). ASU 2016-02 addresses the financial reporting of leasing transactions. Under current guidance for lessees, leases are only

Note 2 — Summary of Significant Accounting Policies (Continued)

included on the balance sheet if certain criteria, classifying the agreement as a capital lease, are met. This update will require the recognition of a right-of-use asset and a corresponding lease liability, discounted to the present value, for all leases that extend beyond 12 months. For operating leases, the asset and liability will be expensed over the lease term on a straight-line basis, with all cash flows included in the operating section of the statement of cash flows. For finance leases, interest on the lease liability will be recognized separately from the amortization of the right-of-use asset in the statement of operations and the repayment of the principal portion of the lease liability will be classified as a financing activity while the interest component will be included in the operating section of the statement of cash flows. This guidance is effective for annual and interim reporting periods beginning after December 15, 2019 as the Company is an emerging growth company. Early adoption is permitted. The Company has not yet completed the analysis of how adopting this guidance will affect its consolidated financial statements.

In January 2016, FASB issued ASU 2016-01 (“ASU 2016-01”), which amends the guidance in U.S. GAAP on the classification and measurement of financial instruments. Changes to the current guidance primarily affect the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. In addition, the ASU clarifies guidance related to the valuation allowance assessment when recognizing deferred tax assets resulting from unrealized losses on available-for-sale debt securities. The new standard is effective for fiscal years and interim periods beginning after December 15, 2017, and upon adoption, an entity should apply the amendments by means of a cumulative-effect adjustment to the balance sheet at the beginning of the first reporting period in which the guidance is effective.

In May 2014, FASB issued Accounting Standards Update (“ASU”) 2014-09, Revenue from Contracts with Customers (Topic 606) (“ASU 2014-09”), which supersedes existing revenue recognition guidance. The standard’s core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods and services. The standard defines a five-step process to achieve this principle and requires companies to use more judgment and make more estimates than under the previous guidance. These judgments and estimates include identifying performance obligations in the customer contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU 2014-09 also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts. The new standard is effective for fiscal years and interim periods beginning after December 15, 2018 as the Company is an emerging growth company. The Company is currently evaluating the impact of adopting this guidance.

Note 3 — Property and Equipment, net

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

	December 31, 2017	December 31, 2016
Lab Equipment	$ 294,509	$ 294,509
Leasehold Improvements	74,390	63,310
	368,899	357,819
Less accumulated depreciation and amortization	(178,928)	(106,293)
	$ 189,971	$ 251,526

SeqLL Inc.

Notes to Consolidated Financial Statements
December 31, 2017 and 2016

Note 3 — Property and Equipment, net (Continued)

Depreciation expense amounted to $72,636 and $48,862 for the years ended December 31, 2017 and 2016, respectively.

Note 4 — Accrued Expenses

Accrued expenses consist of the following:

	December 31, 2017	December 31, 2016
Employee compensation	$ 22,550	$ 27,402
Interest expense	192,006	29,723
Professional and legal fees	17,422	61,200
Other	7,393	4,227
	$239,371	$122,552

Note 5 — Stock Option Plan

The Company's 2014 Equity Incentive Plan (the "Plan") permits the grant of share options and shares to its employees and certain non-employees for up to 2,000,000 shares. As of December 31, 2017, there were 915,000 shares available for future issuance under the Plan. Generally, option awards are granted with an exercise price equal to the market price 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 Plan).

	Number of Options	Weighted-Average Exercise Price per Share	Weighted Average Remaining Contractual Term (in Years)	Aggregate Intrinsic Value
Outstanding as of January 1, 2017	1,230,000	$0.49	9.06	$ 11,500
Granted	—	—	—	—
Exercised	—	—	—	—
Cancelled/Forfeited	(145,000)	0.52		$ 81,100
Oustanding as of December 31, 2017	1,085,000	$0.49	7.98	$557,250
Vest and unvested expected to vest at December 31, 2017	1,030,750	$0.49	7.98	$529,388
Exercisable at December 31, 2017	724,408	$0.47	7.77	$384,423

The following table provide the assumptions used in determining the fair value of share-based awards for the year ended December 31, 2016. There were no options granted in 2017.

	2016
Risk-free interest rate	1.15 – 2.13%
Expected option life	6.25
Expected dividend yield	—%
Expected stock price volatility	70 – 72%

SeqLL Inc.

Notes to Consolidated Financial Statements
December 31, 2017 and 2016

Note 5 — Stock Option Plan (Continued)

The Company's expected stock price volatility assumption is based on the volatility of comparable public companies. The Company used a simplified method to estimate the expected life assumption. 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 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 also be cancelled.

The weighted-average fair value of all options granted during the years ended December 31, 2017 and 2016 estimated as of the grant date using the Black-Scholes option valuation model, was $0 and $.36 per share, respectively. During the years ended December 31, 2017 and 2016, the Company recorded $111,021 and $88,447 of stock-based compensation expense associated with vesting of stock options, respectively. As of December 31, 2017, there was $63,624 of unrecognized compensation expense related to unvested share-based compensation awards, which will be recognized over a weighted average period of 2.45 years.

Note 6 — Related Party Transactions

At December 31, 2017 and 2016, the Company had receivables due from the St. Laurent Institute, Inc. a related party through common ownership, in the amounts of $0 and $46,807, respectively for sequencing services provided to the related party in the ordinary course of business.

For the years ended December 31, 2017 and 2016, the Company had revenues from sales of sequencing kits, sequencing services and equipment sales to the St. Laurent Institute of $300,000 and $75,007, respectively.

For the years ended December 31, 2017 and 2016, the Company incurred expenses payable to the St. Laurent Institute for services related to sequence analysis amounting to $113,954 and $0, respectively. For the years ended December 31, 2017 and 2016, the Company incurred expenses payable to St. Laurent Realty, Inc. for services related to clerical and accounting amounting to $363 and $0, respectively.

At December 31, 2017 and 2016, the Company had outstanding payables of $250 and $0 to St. Laurent Realty, Inc.

Note 7 — Income Taxes

The company is subject to United States federal and Massachusetts state income taxes at an approximate combined rate of 42%. During the years ended December 31, 2017 and 2016, 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 Company records a full valuation allowance against its deferred tax assets as the Company believes it is more likely than not the deferred tax assets will not be realized. The primary component of the Company's deferred tax assets are its net operating loss carryforwards. At December 31, 2017, the Company had approximately $4,285,000 of federal and state net operating carryforwards that begin to expire in 2034. The valuation allowance against deferred tax assets was approximately $748,000 and $566,000 as of December 31, 2017 and 2016, respectively.

SeqLL Inc.

Notes to Consolidated Financial Statements
December 31, 2017 and 2016

Note 7 — Income Taxes (Continued)

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, 2017 and 2016 due to the following:

	2017	2016
Computed "expected" tax benefit	-34.0%	-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	42.0%	42.0%
	0.0%	**0.0%**

Note 8 — Notes Payable

In March 2013, the Subsidiary entered into a Purchase Agreement (the "Purchase Agreement") with Helicos Biosciences Company ("Helicos") to purchase certain assets related to DNA and RNA sequencing for a purchase price of $575,000. In conjunction with the Purchase Agreement, the Company issued to Helicos a note payable (the "Note") in the amount of $500,000 to finance the asset purchase. The interest rate on the Note equals 3% per annum and is payable monthly. The Note is collateralized by primarily all of the assets the Subsidiary acquired from Helicos.

Principal payments on the Note are due quarterly and are based on the Subsidiary meeting certain thresholds of annual gross revenues as defined in the Purchase Agreement.

As of December 31, 2017 and 2016, the Subsidiary met the required gross revenue thresholds and made principal payments in the amounts of $10,517 and $57,687, respectively. The Note matured on December 31, 2017. As of December 31, 2017, and 2016, the outstanding balances of the Note were $287,439 and $297,956, respectively.

Between September 2016 and December 2017, the Company entered into a series of convertible promissory notes (the "Promissory Notes") with certain preferred stockholders amounting to $1,970,000, and accrued interest at 10% per annum. The Promissory Notes are convertible at the share price paid by the purchasers of equity securities in the next Qualified Financing, as defined. In connection with the Promissory Notes, the Company is obligated to issue warrants to purchase the number of common shares equal to 6% of the total amount of shares related to the conversion of the Promissory Notes. The exercise price of the warrants will be the share price paid by the purchasers of equity securities in the next Qualified Financing. The Company issued an aggregate of $1,970,000 principal value of Promissory Notes to two existing shareholders. The Promissory Notes have a maturity date of October 13, 2018.

Note 9 — Common Stock

The Company's Certificate of Incorporation, as amended and restated, authorizes the Company to issue 13,125,000 shares of $0.00001 par value common stock, of which 9,000,000 shares were issued and outstanding at December 31, 2017 (see Note 1).

Each share of common stock entitles the holder to one vote on all matters submitted to a vote of the Company's stockholders. Common stockholders are entitled to receive dividends, as may be declared by the board of directors. When dividends are declared on shares of common stock, the Company must simultaneously declare a dividend payable to the holders of the Preferred Stock (Note 10) equivalent to the dividend amount they would receive if each preferred share were converted into common stock. As of December 31, 2017 and 2016, no dividends had been declared.

SeqLL Inc.

Notes to Consolidated Financial Statements
December 31, 2017 and 2016

Note 10 — Preferred Stock

In September 2014, the Company entered into Series A-1 Preferred Stock Purchase Agreement. The Company sold an aggregate of 3,125,000 total shares of Series A-1 Preferred Stock for the Purchase Price of $0.32 per share, in exchange for aggregate gross proceeds of $1,000,000.

In May 2016, the Company entered into Series A-2 Preferred Stock Purchase Agreement. The Company sold an aggregate of 729,165 total shares of Series A-2 Preferred Stock for the Purchase Price of $1.68 per share, in exchange for aggregate gross proceeds of $1,224,997.

The rights and preferences at December 31, 2017 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 Series A 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 $0.32; and the Series A-2 Original Issue Price of 1.68 by the Series A-2 Conversion Price of $1.68; 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 Series A 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 $5.00 (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 price was $2,204,837 at December 31, 2017.

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, 2017, no dividends have been declared by the Company's Board of Directors.

SeqLL Inc.

Notes to Consolidated Financial Statements
December 31, 2017 and 2016

Note 11 — Common Stock Warrants

The following table summarizes information with regard to outstanding warrants to purchase common stock as of December 31, 2017.

Issuance Date	Number of Shares Issuable Upon Exercise of Outstanding Warrants	Exercise Price	Expiration Date
2/19/2016	17,857	$1.68	2/19/2021
2/19/2016	17,857	$1.68	2/19/2021
3/25/2016	5,357	$1.68	3/25/2021
3/25/2016	2,678	$1.68	3/25/2021
9/12/2016	17,857	$1.68	9/12/2021
9/14/2016	17,857	$1.68	9/14/2021
1/27/2017	8,035	$1.68	1/27/2022
2/22/2017	892	$1.68	2/22/2022
2/27/2017	8,928	$1.68	2/27/2022
5/4/2017	7,142	$1.68	5/4/2022
6/14/2017	2,500	$1.68	6/14/2022
11/27/2017	3,571	$1.68	11/27/2022
12/13/2017	3,571	$1.68	12/13/2022
Total	**114,102**		

These warrants have been recorded as derivative liabilities (see Note 2). At December 31, 2017, the weighted average remaining life of the outstanding warrants is 4.06 years, all warrants are exercisable, and the aggregate intrinsic value for the warrants outstanding was $0.

Note 12 — Commitments and Contingencies

In November 2014, the Company entered an office space lease in Woburn, Massachusetts (the “Lease”), which was considered the Company’s corporate headquarters, which expires January 31, 2020. Rent expense was $92,665 per year for years ended December 31, 2017 and 2016.

The future minimum lease commitments under non-cancellable leases described above are as follows for the fiscal year ending December 31:

2018	$103,802
2019	108,724
2020	27,489
Total	$240,015

Note 13 — Subsequent Events

On March 15, 2018, the Company negotiated a final settlement payment for the Note (see Note 8) in the amount of $105,000. The principal and interest outstanding at December 31, 2017 on the Note was $290,416. The Note was cancelled and forgiven upon legal acceptance of payment.

SeqLL Inc.

Notes to Consolidated Financial Statements
December 31, 2017 and 2016

Note 13 — Subsequent Events (Continued)

On May 17, 2018, the company's Chief Executive Officer, Dr. Elizabeth Reczek, Ph.D., resigned from the Company, thereby terminating her employment agreement. Her resignation is not the result of any disagreement with the Company. The Company paid Dr. Reczek any compensation that was earned but unpaid prior to resignation. Dr. Reczek's stock options for 360,000 shares of common stock expired unexercised as of August 14, 2018.

On July 27, 2018, the Company received $120,000 in new investment capital from the issuance of 71,428 shares of Series A-2. The placement agent, Terranova Capital Partners, earned a warrant for 5,714 shares of common stock exercisable at $1.68 per share.

On August 20, 2018, the Company's Board voted John W. Kennedy to be their Chief Financial Officer and Secretary.

On September 15, 2018, the Company entered into a 1-year lease agreement of $2,700 monthly for John Kennedy's housing.

From January 1, 2018 through September 30, 2018, the Company entered into a series of convertible promissory notes with certain preferred stockholders amounting to $1,435,000, including warrants for 111,964 shares of common stock.

In September 2018 the Board granted incentive-based stock options totaling 990,000 to Daniel Jones (300,000), John Kennedy (250,000), Abhijeet Sinde (200,000), and Cathy Birle (20,000), as well as the 4 Members of the Board 30,000 each in a newly established Directors' compensation package.

On September 30, 2018, the Company exchanged $3,135,000 (the "Notes") of $3,405,000 in outstanding senior convertible promissory notes and their warrants for (i) 1,866,071 shares of Series A-2 Preferred Stock; (ii) a warrant for 900,000 shares of common stock exercisable at $1.17 per share; (iii) another warrant for 111,964 shares of common stock exercisable at $1.68 per share and (iv) a 1-year promissory note bearing 10% interest per annum and payable in cash upon a public offering in the amount of $360,710 for the accrued interest under the Notes as of September 30, 2018.

Shares of

Common Stock

PROSPECTUS

, 2018

WallachBeth Capital, LLC

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	$1,212
FINRA filing fee	$ *
The Nasdaq Capital Market initial listing fee	$ *
Printing and engraving expenses	$ *
Accounting fees and expenses	$ *
Legal fees and expenses	$ *
Transfer agent and registrar fees	$ *
Miscellaneous fees and expenses	$ *
Total	$ *

* To be filed by amendment.

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 of 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 September 30, 2015 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) Option Agreements with Abhijeet Shinde dated March 31, 2014 for 250,000 and December 1, 2016 for 80,000 incentive stock options pursuant to the 2014 Plan

(2) Option Agreement with Elizabeth Reczek dated November 17, 2015 for 360,000 incentive stock options pursuant to the 2014 Plan.

(3) On March 25, 2016, the Company issued 729,165 shares of Series A-2 Convertible Preferred Stock and 43,749 warrants to purchase one share of common stock for $1.68 per share, resulting in proceeds of $1,224,997.

(4) Option Agreement with Andrea Ashford Hicks dated July 24, 2016 for 30,000 nonstatutory stock options pursuant to the 2014 Plan.

(5) Option Agreements with certain employees dated November 9, 2016 for an aggregate 432,000 stock options pursuant to the 2014 Plan.

(6) Option Agreement with certain employees dated December 9, 2016 for an aggregate 10,000 incentive stock options pursuant to the 2014 Plan.

(7) On March 15, 2018, the Company negotiated a final settlement payment for the promissory notes issued to Helicos Biosciences Company in the amount of $105,000 (the "Helicos Note"). The principal and interest outstanding at December 31, 2017 on the Helicos Note was $290,416. The Helicos Note was cancelled and forgiven upon legal acceptance of payment. The Notes carry a warrant in the amount equal to 6% of the Helicos Note to purchase stock of the Company.

(8) Through the date ending September 5, 2018, the Company entered into a series of convertible promissory notes with certain preferred stockholders amounting $3,314,315 and accruing interest at 10% per annum. On September 30, 2018, the Company entered into an Exchange Agreement with St. Laurent Investments, LLC (the "SLT") to exchange the outstanding the SLT's promissory notes in the amount of $3,135,000 for (i) 1,866,071 shares of the Company's Series A-2 Preferred Stock; (ii) warrants equal to 111,964 shares of common stock; (iii) warrants equal to 900,000 shares of common stock and (iv) a new promissory note in the amount of $360,710 for the accrued interest for the SLT notes as of September 30, 2018.

(9) Option Agreements with certain employees and directors dated September 6, 2018 for an aggregate 790,000 stock options pursuant to the 2014 Plan.

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 inventive 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;

(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
1.1*	Form of Underwriting Agreement
3.1*	Amended and Restated Certificate of Incorporation, as currently in effect
3.2*	Bylaws, as currently in effect
3.3*	Form of Amended and Restated Certificate of Incorporation, to be in effect upon the completion of this offering
3.4*	Form of Amended and Restated Bylaws, to be in effect upon the completion of this offering
4.1*	Specimen common stock certificate
4.2*	Form of Underwriters' Warrant
4.3*	Form of Convertible Note
4.4*	Form of Outstanding Warrant
5.1*	Opinion of Foley & Lardner LLP
10.1*#	Amended and Restated 2014 Equity Incentive Plan
10.2*	License Agreement dated March 15, 2013 between SeqLL, LLC and Helicos Biosciences Corporation
10.3*	Sub-License Agreement dated March 15, 2013 between SeqLL, LLC and Helicos Biosciences Corporation
10.4*	Form of Amended and Restated Investors Rights Agreement
10.5*	Commercial Lease dated November 25, 2014 by and between SeqLL, LLC, JAM Cambridge Ventures, LLC and RAM Cambridge Venture LLC
10.7*	First Amendment to the Lease Agreement dated April 1, 2016, by and between SeqLL, LLC, JAM Cambridge Ventures, LLC and RAM Cambridge Venture LLC
10.8*	Amended and Restated Voting Agreement

Exhibit Number	Description of Exhibits
10.9*	Amended and Restated Right of First Refusal and Co-Sale Agreement
10.10*	Exchange Agreement dated September 30, 2018 by and between SeqLL Inc. and St. Laurent Investments, LLC
10.11*	Form of Stock Option Agreement
10.12*	Form of Series A-1 Preferred Stock Purchase Agreement
10.13*	Form of Amended and Restated Series A-2 Preferred Stock Purchase Agreement
21.1*	Subsidiaries of the Registrant
23.1	Consent of Wolf & Company, P.C., independent registered public accounting firm
23.2*	Consent of Foley & Lardner LLP (included in Exhibit 5.1)
24.1	Power of Attorney (included on signature page to this registration statement)

* 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 16th day of November, 2018.

SEQLL INC.

By: /s/ Daniel Jones

Daniel Jones
Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned directors and officers of SeqLL Inc., hereby severally constitute and appoint Daniel Jones and John Kennedy, and each of them, our true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution for him or her and in his or her name, place, and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and any subsequent registration statements pursuant to Rule 462 of the Securities Act of 1933, as amended and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as we might or could do in person, hereby ratifying and confirming all that each of said attorney-in-fact or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof. Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Daniel Jones Daniel Jones	Chief Executive Officer and Director *(Principal Executive Officer)*	November 16, 2018
/s/ John W. Kennedy John W. Kennedy	Chief Financial Officer and Secretary *(Principal Financial and Accounting Officer)*	November 16, 2018
/s/ William C. St. Laurent William C. St. Laurent	Director	November 16, 2018
/s/ Douglas Miscoll Douglas Miscoll	Director	November 16, 2018
/s/ David Pfeffer David Pfeffer	Director	November 16, 2018

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use in this Registration Statement on Form S-1 of SeqLL Inc. of our report dated November 16, 2018, 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 heading “Experts” in such Prospectus.

/s/ Wolf & Company, P.C.

Wolf & Company, P.C.
Boston, Massachusetts
November 16, 2018