

PROSPECTUS

2,400,000 Shares

celcuity

FUNCTIONAL CELLULAR ANALYSIS

Common Stock

This is the initial public offering of our common stock. We are offering 2,400,000 shares of common stock. Prior to this offering, there has been no public market for our common stock. The initial public offering price is \$9.50 per share. Our common stock has been approved for listing on The Nasdaq Capital Market under the symbol “CELC.”

We are an “emerging growth company” under applicable Securities and Exchange Commission rules and will be eligible for, and have decided to comply with, reduced public company disclosure requirements. See “Prospectus Summary — Implications of Being an Emerging Growth Company.”

Investing in our common stock involves a high degree of risk. See “Risk Factors” beginning on page 12 of this prospectus for a discussion of information that should be considered in connection with an investment in our securities.

Neither the Securities and Exchange Commission nor any state securities regulators have approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	\$ 9.50	\$22,800,000
Underwriting discounts and commissions ⁽¹⁾	\$0.665	\$ 1,596,000
Proceeds, before expenses, to us	\$8.835	\$21,204,000

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- (1) In addition, we have agreed to reimburse the underwriter for certain expenses. See “Underwriting” for additional disclosure regarding underwriting discounts, commissions and estimated offering expenses.

We have granted the underwriter an option for a period of 30 days from the date of this prospectus to purchase up to an additional 360,000 shares of common stock to cover over-allotments, if any.

Delivery of the shares of our common stock will be made on or about September 22, 2017, subject to customary closing conditions.

Craig-Hallum Capital Group

Prospectus dated September 19, 2017

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ABOUT THIS PROSPECTUS

You should rely only on the information contained in this prospectus and any free writing prospectus prepared by or on behalf of us or to which we have referred you. Neither we nor the underwriter has authorized anyone to provide you with information that is different. We are offering to sell shares of our common stock, and seeking offers to buy shares of our common stock, only in jurisdictions where offers and sales are permitted. The information in this prospectus is complete and accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or any sale of shares of our common stock.

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

Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to “Celcuity,” “the company,” “we,” “us,” “our” and similar references refer to (1) prior to the completion of our conversion described under “Certain Relationships and Related Party Transactions—LLC Conversion,” Celcuity LLC, a Minnesota limited liability company, and (2) after giving effect to such conversion, which occurred on September 15, 2017, Celcuity Inc., a Delaware corporation. We own various unregistered trademarks and servicemarks, including our corporate logo. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the ® and ™ symbols, but such references should not be construed as any indicator that the owner of such trademarks and trade names will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend the use or display of other companies’ trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

INDUSTRY AND MARKET DATA

In addition to the industry, market and competitive position data referenced in this prospectus from our own internal estimates and research, some market data and other statistical information included in this prospectus are based in part upon information obtained from third-party industry publications, research, surveys and studies, none of which we commissioned. Third-party industry publications, research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

We are responsible for all of the disclosure in this prospectus and while we believe that each of the publications, research, surveys and studies included in this prospectus are prepared by reputable sources, neither we nor the underwriter have independently verified market and industry data from third-party sources. In addition, while we believe our internal company research and estimates are reliable, such research and estimates have not been verified by independent sources. Assumptions and estimates of our and our industry’s future performance are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in “Risk Factors.” These and other factors could cause our future performance to differ materially from our assumptions and estimates. See “Special Note Regarding Forward-Looking Statements.”

IMPLICATIONS OF BEING AN EMERGING GROWTH COMPANY

As a company with less than \$1.0 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, enacted in April 2012. An “emerging growth company” may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements and only two years of related Management’s Discussion and Analysis of Financial Condition and Results of Operations in this prospectus;

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration 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.

We may use these provisions until the last day of our fiscal year following the fifth anniversary of the closing of our initial public offering. However, if certain events occur prior to the end of such five-year period, including if we become a “large accelerated filer,” our annual gross revenue exceed \$1.0 billion or we issue more than \$1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have elected not to avail ourselves of this exemption and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this prospectus and is qualified in its entirety by the more detailed information and financial statements included elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. Before you decide to invest in our common stock, you should read and carefully consider the following summary together with the entire prospectus, including our financial statements and the related notes thereto appearing elsewhere in this prospectus and the matters discussed in the sections in this prospectus entitled “Risk Factors,” “Selected Financial Data and Pro Forma Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” Some of the statements in this prospectus constitute forward-looking statements that involve risks and uncertainties. See “Special Note Regarding Forward-Looking Statements.” Our actual results could differ materially from those anticipated in such forward-looking statements as a result of certain factors, including those discussed in the “Risk Factors” and other sections of this prospectus.

OUR BUSINESS

We are a cellular analysis company that is discovering new cancer sub-types and commercializing diagnostic tests designed to significantly improve the clinical outcomes of cancer patients treated with targeted therapies. Our proprietary CELx diagnostic platform is the only commercially ready technology we are aware of that uses a patient’s living tumor cells to identify the specific abnormal cellular activity driving their cancer and the targeted therapy that can best treat it. This enables us to develop tests that diagnose new cancer sub-types molecular diagnostics cannot detect and measure directly the effectiveness of the matching targeted therapy in a patient’s living tumor cells. We believe pharmaceutical companies will be motivated to partner with us because our ability to offer diagnostic tests that identify new cancer sub-types will provide an opportunity to identify a larger pool of patients that may benefit from their targeted therapies. We are collaborating with pharmaceutical companies and plan to conduct clinical trials evaluating their targeted therapies in patients selected by our diagnostic tests. Our initial collaboration activities focus on therapies that have already received FDA approval, which we believe will significantly reduce the scope and length of the clinical trials. A successful pharmaceutical company collaboration could ultimately result in approval of a new indication for a targeted therapy that requires use of our test as a companion diagnostic. Our ability to attract partnership opportunities will enable us, we believe, to scale rapidly in a capital efficient manner.

We believe our CELx platform provides two important improvements over the traditional molecular diagnostic tests used to guide a physician’s selection of targeted therapies for their cancer patients. First, molecular diagnostics can only provide a snapshot of the genetic mutations present in a patient’s tumor because they analyze dead cells. Using dead cells prevents molecular diagnostics from analyzing in real-time the dynamic cellular activities, known as cell signaling, that regulate cell proliferation or survival and can cause cancer when signaling activity becomes abnormal. Since genetic mutations are often only weakly correlated to the cell signaling activity driving a patient’s cancer, a molecular diagnostic is prone to providing an incomplete diagnosis. CELx tests overcome this limitation by measuring real-time cell signaling activity in a patient’s living tumor cells. When a CELx test detects abnormal signaling activity, a more accurate diagnosis of the patient’s cancer driver is obtained. Second, molecular diagnostics can only estimate the probability of a patient’s potential drug response based on a statistical analysis of the drug’s clinical trial results. Instead of this indirect estimate of drug response, CELx tests directly measure the effectiveness of a targeted therapy in a patient’s living tumor cells. This enables physicians to confirm that the therapeutic matching the patient’s cancer driver is functional in his or her tumor cells before prescribing it, which significantly increases the likelihood of a positive clinical outcome.

Our first analytically validated and commercially ready test using our CELx platform is our CELx HER2 Signaling Function Test, or CELx HSF Test. Our CELx HSF Test diagnoses two new breast cancer sub-types that traditional molecular diagnostics cannot detect. Abnormal activity in the HER2 signaling network, a key cellular process that regulates cell proliferation, plays a role in many breast cancers. To diagnose patients with HER2 breast cancer, molecular diagnostics analyze HER2 protein, one component of the complex HER2 signaling network. If these molecular diagnostics find excess HER2 protein levels in a patient’s tumor cells, patients are diagnosed with HER2 breast cancer (HER2+) and then are treated with

anti-HER2 targeted therapies. However, several clinical trials found that a sub-group of patients with normal HER2 protein levels (HER2-negative) respond to anti-HER2 therapies, revealing that measuring HER2 protein levels alone misses patients who have HER2-driven breast cancer. To provide a more complete diagnosis for HER2-negative breast cancer patients, our CELx HSF Test determines whether the HER2 signaling network in a patient's tumor cells is functioning abnormally. Our studies show that approximately 20% of HER2-negative breast cancer patients have abnormal HER2 signaling activity similar to levels found in HER2+ breast cancer cells. As a result, these HER2-negative patients have undiagnosed HER2-driven breast cancer and would likely respond to the same anti-HER2 targeted therapies only HER2+ patients receive today.

Our CELx HSF Test is targeting HER2-negative breast cancer patients receiving treatment, which includes, based on 2016 estimates from the National Cancer Institute's SEER Cancer Statistic Review, or NCI SEER Review, and a May 2017 publication by the American Association for Cancer Research, or AACR, approximately 278,000 patients annually in the U.S. Based on this patient population, we estimate the annual U.S. market opportunity for our CELx HSF Test alone is approximately \$1.1 billion, assuming a price of \$4,000 per test, which is in line with prices for complex molecular diagnostic tests. In addition, as a companion diagnostic, or CDx, we estimate this test could potentially drive approximately \$4 billion of new U.S. annual revenue for HER2 therapies. This assumes HER2-negative breast cancer patients diagnosed with abnormal HER2 signaling by our CELx HSF Test, roughly 20% of all HER2-negative breast cancer patients, or 55,000 patients annually, are treated with HER2 therapies costing approximately \$73,000 per patient. The per patient therapy cost assumed is in line with the cost of Herceptin® and Perjeta®, the current standard of care HER2 drug treatment regimen that, according to Genentech Inc., or Genentech, at the time of launching Perjeta® in 2012, had a wholesale price of \$10,900 per month. According to the Roche 2016 Annual Report, these two HER2 drugs generated more than \$8.9 billion of revenue in 2016.

Once our CELx HSF Test was analytically validated and became commercially ready, we sought opportunities to collaborate with pharmaceutical companies that owned HER2 drugs. Our efforts resulted in a collaboration with Genentech and the National Surgical Adjuvant Breast and Bowel Project Foundation, or NSABP, to field a prospective clinical trial to evaluate the efficacy of two of Genentech's HER2 targeted therapies in patients with the newly identified cancer sub-types our CELx HSF Test identifies. We expect interim results from this trial 10 to 12 months after the first patient is enrolled in late 2017 and final results in 18 to 21 months. We believe a successful outcome of this collaboration will demonstrate the suitability of our CELx HSF Test as a CDx for HER2 therapies and support our activities to attract other pharmaceutical company partnerships.

In addition to the two new breast cancer sub-types our CELx HSF Test diagnoses, we discovered 14 new potential cancer sub-types in breast, lung, colon, ovarian, kidney, bladder and hematological cancers. Based on 2016 estimates from the NCI SEER Review and 2017 data available from the American Cancer Society, or ACS, we estimate that approximately 880,000 patients are treated annually in the U.S. for one of these cancer types. Approved or investigational drugs are currently available to treat each of these new potential cancer sub-types. CELx tests for these additional cancer sub-types are in various stages of development, and we expect them to become commercially ready on a staggered basis over the next few years. The development process for these additional CELx tests will mirror the process used to develop our CELx HSF test. This process includes completion of internal animal, verification, training set, and validation studies. As new CELx tests become commercially ready, we expect to initiate collaborations with pharmaceutical companies to help them obtain new drug indications for the new cancer sub-types our tests identify. The resulting total annual addressable test market, defined as the 880,000 cancer patients we are developing CELx tests for, is approximately \$3.5 billion, assuming a price of \$4,000 per test. In addition, we will continue our research to identify additional new cancer sub-types and to develop the corresponding CELx tests to diagnose them.

OUR PLATFORM

The use of molecular diagnostic tests to select targeted therapies has largely fallen short of public expectations. Patient response rates to therapies targeting a genetic mutation are typically less than 50% and in some cases only 10% to 20%, creating a significant need for an alternative approach. In addition, many cancers lack a genetic biomarker to guide treatment. For those patients, the cellular dysfunction responsible

for their cancer goes undiagnosed, which means they are less likely to receive a potentially beneficial targeted therapy. The table below provides objective response rates for representative targeted therapies that rely on a CDx to select eligible patients, as well as an example of the objective response rate for a targeted therapy that does not use a CDx to select eligible patients. The objective response rates listed below were obtained from the clinical trial data included with each of the targeted therapies respective FDA labels.

Targeted Therapy Objective Response Rates

Targeted Therapy (FDA Label Date)	Type of Cancer	Biomarker	Objective Response Rate ⁽¹⁾
<i>Herceptin</i> [®] (04/17)	Breast	HER2	16%
<i>Perjeta</i> [®] (03/16)	Breast	HER2	11%
<i>Gilotrif</i> [®] (07/13)	Lung	EGFR mutations	31%
<i>Votrient</i> [®] (05/17)	Kidney	None	27%
<i>Erbixux</i> [®] (10/16)	Colon	EGFR/K-Ras WT	18%

(1) Objective response rate (ORR) is the difference between the ORR of the targeted therapy and the ORR of the control drug during the targeted therapy's pivotal clinical trial as reported in the targeted therapy's FDA drug label.

Our CELx platform addresses the need for more accurate cancer diagnoses by incorporating our internally developed cell microenvironment and cell signaling quantification technologies. Unlike molecular tests that use fixed or lysed (dead) cells and can only measure the static composition of a cell, our CELx platform measures real-time signaling activity in a patient's live tumor cells. This enables us to: (1) identify the cellular signaling abnormalities driving a patient's cancer; and (2) confirm whether the matching targeted therapy is effective in the patient's cells.

- **Cell microenvironment.** Culturing living tumor cells poses three primary challenges. First, there is typically only a small amount of patient tumor tissue available. Second, the tumor cells often die once they are removed from the tumor tissue. Third, tumor cells that do survive are difficult to maintain. Moreover, when conventional cell culture approaches are used it can often take more than two months to prepare a test sample and the success rate is typically less than 50%. Our proprietary cell microenvironment technologies were designed to overcome these challenges and provide a testable cell sample from a patient tumor specimen as small as 20 milligrams in 10 to 14 days for more than 90% of the patient tumor specimens we receive.
- **Dynamic cell signaling quantification.** We analyze the signaling pathway activity of live patient tumor cells using a biosensor that converts the dynamic cellular response to pathway activators or pathway inhibitors to a measurable electrical signal in real-time. To determine the activity of a specific signaling pathway, an activating agent specific to a pathway receptor is used to turn on the pathway and a corresponding inhibitory agent specific to the pathway receptor is used to turn signaling off. Thus, our tests allow us to identify both the signaling pathway abnormalities driving a patient's cancer and to confirm whether a matching targeted therapy may prove beneficial.

Our CELx tests are performed in our laboratory in Minneapolis, Minnesota that is certified under the Clinical Laboratory Improvement Amendments of 1988, or CLIA, and accredited by the College of American Pathologists, or CAP. We have one U.S. patent, four pending U.S. patent applications, one pending PCT patent application, as well as numerous corresponding non-U.S. patent applications covering our diagnostic approach using cell signaling analysis in living patient cells to guide treatment of patients with targeted therapies.

OUR STRATEGY AND COMPETITIVE STRENGTHS

We believe our CELx platform will fundamentally change the standard-of-care many cancer patients receive. Our platform enables us to discover new cancer sub-types and diagnose them in patients. Patients with these newly identified cancer sub-types have oncogenic pathways that are signaling abnormally, and, we believe, may respond positively to a matching targeted therapy. By identifying patients with a new cancer sub-type, each CELx test will create, in effect, a proprietary patient population that molecular diagnostics cannot identify.

Our initial commercial strategy is to partner with pharmaceutical companies to provide companion diagnostics for the pharmaceutical partners' existing or investigational targeted therapies. We expect such partnerships to involve collaboration on clinical trials, regulatory submissions, and commercialization activities. We will initiate activities to pursue partnerships as our CELx tests become commercially ready and can be matched with a potential partner's targeted therapies. Our commercial-related efforts to date have focused on seeking partnerships for our CELx HSF test, which became commercially ready as a laboratory developed test after it was analytically validated in 2016. We expect to seek pharmaceutical partnerships for a variety of different targeted therapies in other solid tumor types as we are conducting our initial clinical trial with Genentech and the NSABP, which is expected to begin in late 2017.

We believe our CELx CDx tests will expand the matching drug's market size because they can facilitate approval of new drug indications that a pharmaceutical company would not otherwise be able to obtain. We expect that successful pharmaceutical company partnerships will generate significant revenue from the sale of CELx tests to identify patients eligible for clinical trials, from milestone payments, and, potentially, from royalties on the incremental drug revenues our tests enable. A key requirement for success of these partnerships will be clinical trial results that demonstrate the advantages of using a CELx test as a companion diagnostic. Once a new drug indication is received that requires use of our CDx to identify eligible patients, we will offer our tests directly to treating physicians and coordinate go-to-market strategies with our partner. This coordination of commercialization strategies will allow us to significantly leverage the sales, marketing and reimbursement resources of our pharmaceutical partner, unlike traditional molecular diagnostic companies.

We have a number of key strengths that enhance our ability to achieve our mission and build a successful company:

- **First mover.** We are the first company we are aware of to launch diagnostic tests that measure the signaling pathway activity in a patient's live tumor cells, which we believe gives us a significant first mover advantage.
- **High barriers to entry.** Our issued and pending patents, as well as our proprietary information and trade secrets give, us a strong intellectual property position that we believe creates a significant barrier to entry for potential competitors.
- **Broad range of applications for our platform.** We can develop tests for a wide range of signaling pathways and a wide range of cancer types. This allows us to build a deep new product pipeline that creates multiple paths to build a large and profitable business.
- **Multi-billion-dollar addressable market.** The broad range of pathways and cancer tissues we can test with our CELx platform enables us to initially target up to approximately 880,000 cancer patients per year, creating a \$3.5 billion addressable market for our CELx tests based on our expected selling price of at least \$4,000 per test.
- **Diverse revenue streams including pharma partnerships.** We anticipate generating significant revenue from CDx pharmaceutical partners, including revenue from the sale of tests to identify patients eligible for clinical trials, milestone payments, and potentially, royalties on the incremental drug revenues our tests enable. Our most significant revenue opportunity comes from ongoing sales of CELx tests to physicians during the commercialization stage of the CDx.
- **Strong senior leadership team.** Our founders and senior leaders have a proven track record of success building, operating and selling several successful companies. We have deep and highly relevant and complementary diagnostic, scientific, product development, and commercialization experience that has enabled us to establish market leadership positions for the companies we previously led.

Our goal is to leverage our technology to build a durable competitive advantage that enables us to improve outcomes for a significant percentage of cancer patients. We believe our CELx platform offers a number of advantages over molecular profiling tests to accomplish this:

- **Powerful cancer sub-type discovery tool.** We have already discovered 16 new potential cancer sub-types that cannot be diagnosed with molecular diagnostics.
- **Direct patient-specific assessment of disease status.** Our platform provides the most complete assessment available today of the intracellular activity driving a patient's cancer by analyzing a patient's living tumor cells.
- **Direct measurement of matching drug effectiveness.** The CELx platform evaluates whether there are inherent drug resistance mechanisms that would prevent the therapy from functioning in the patient's tumor cells. Molecular tests cannot provide this evaluation.
- **Improved response rates.** We believe a patient population will have a higher response rate to a matching targeted therapy when it is diagnosed with a CELx test than with a molecular biomarker.
- **Identify drug responsive proprietary patient cohorts.** We believe our CELx tests will enable us to identify new proprietary patient populations not currently diagnosable with molecular tests and increase the number of patients likely to respond to a matching targeted therapy.
- **Streamlined FDA approval of targeted therapeutics.** CELx tests will enable our pharmaceutical partners to enroll patients in their clinical trials who exhibit the same cellular dysfunction their targeted therapy is designed to inhibit. We believe this will improve patient response rates, increasing the likelihood the trial meets its endpoint target and thus the likelihood the drug receives approval from the U.S. Food and Drug Administration, or FDA. Improved patient response rates would also help reduce the size, cost and length of our partner's clinical trials.

RISKS AFFECTING US

Our business is subject to a number of risks of which you should be aware before making an investment decision. These risks are discussed more fully in the "Risk Factors" section of this prospectus immediately following this prospectus summary. Some of these risks include:

- we have a limited operating history upon which you can evaluate us, and we may never generate revenue or profit;
- our initial success is heavily dependent on the success of our CELx HSF Test;
- we have no ability to determine whether our CELx tests are currently commercially viable;
- we may not be successful in finding pharmaceutical company partners for continuing development of additional CELx tests;
- developing our CELx tests involves a lengthy and complex process that may not be successful;
- clinical trials are expensive and complex with uncertain outcomes, which may prevent or delay commercialization of our CELx tests;
- even if our CELx tests achieve positive clinical trial results, they may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success;
- our business, operational and financial goals may not be attainable if the market opportunities for our CELx tests or our pharmaceutical company partners are smaller than we expect;
- the actual price we are able to charge for our CELx tests may be substantially lower than our expected price range;
- the insurance coverage and reimbursement status of new diagnostic products is uncertain;
- we face significant competition from other diagnostic companies; and
- we may encounter difficulties in commercializing and marketing our products, or in managing growth.

IMPLICATIONS OF BEING AN EMERGING GROWTH COMPANY

As a company with less than \$1.0 billion of revenue during our last fiscal year, we qualify as an emerging growth company as defined in the JOBS Act, and we may remain an emerging growth company for up to five years from the date of the first sale in this offering. However, if certain events occur prior to the end of such five-year period, including if we become a large accelerated filer, our annual gross revenue exceeds \$1.0 billion, or we issue more than \$1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure and other requirements that are applicable to other public companies that are not emerging growth companies. In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation related information that would be required if we were not an emerging growth company. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold equity interests. However, we have irrevocably elected not to avail ourselves of the extended transition period for complying with new or revised accounting standards, and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

LLC CONVERSION

In connection with this offering, on September 15, 2017, we converted from a Minnesota limited liability company into a Delaware corporation and changed our name from Celcuity LLC to Celcuity Inc., which we refer to herein as the “LLC Conversion.” In conjunction with the LLC Conversion:

- all of our outstanding units were converted into an aggregate of 6,440,139 shares of our common stock, based on the relative ownership interests of our pre-LLC Conversion equityholders;
- we adopted and filed a certificate of incorporation and certificate of conversion with the State of Delaware; and
- we adopted a plan of conversion and adopted and filed articles of conversion with the State of Minnesota.

For more information on the LLC Conversion, see the discussion under “Certain Relationships and Related Party Transactions—LLC Conversion.” See “Description of Capital Stock” for additional information regarding a description of our common stock and the terms of our certificate of incorporation and bylaws.

While operating as a limited liability company, our outstanding equity was referred to as “units.” In this prospectus for ease of comparison, we may refer to such units as our common stock for periods prior to the LLC Conversion, unless otherwise indicated in this prospectus. Similarly, unless otherwise indicated, we refer to members’ equity in this prospectus as stockholders’ equity.

OUR CORPORATE INFORMATION

Our principal executive offices are located at 16305 36th Avenue N., Suite 450, Minneapolis, Minnesota 55446, and our telephone number is (763) 392-0123. Our website address is www.celcuity.com. We have included our website address in this prospectus as an inactive textual reference only. Information contained on, or that can be accessed through, our website is not part of this prospectus.

The Offering

The following summary contains basic information about this offering. The summary is not intended to be complete. You should read the full text and more specific details contained elsewhere in this prospectus.

Issuer	Celcuity Inc.
Common stock offered by us	2,400,000 shares
Over-allotment option	The underwriter has an option for a period of 30 days from the date of this prospectus to purchase up to 360,000 additional shares of our common stock to cover over-allotments, if any.
Common stock to be outstanding after this offering⁽¹⁾	9,722,050 shares (or 10,082,050 shares if the underwriter exercises its option to purchase additional shares in full).
Use of proceeds	We estimate that the net proceeds from this offering, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately \$20.1 million, or approximately \$23.3 million if the underwriter exercises its over-allotment option to purchase additional shares from us in full, based on the initial public offering price of \$9.50 per share. We intend to use the net proceeds from this offering as follows: • approximately \$10.0 million to fund additional research and development for discovery of new cancer sub-types and development and validation of new CELx tests; • approximately \$5.0 million for clinical trials to support clinical claims; • approximately \$2.6 million to fund development of operational processes and capital expenditures; and • approximately \$2.5 million for working capital and other general corporate purposes. See “Use of Proceeds” for a more complete description of the intended use of proceeds from this offering.
Dividend policy	We do not expect to pay any dividends or other distributions of our common stock in the foreseeable future. We currently intend to retain future earnings. See “Dividend Policy.”
Risk factors	You should read the “Risk Factors” section of this prospectus and the other information in this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
Listing	We have received approval for listing our common stock on The Nasdaq Capital Market.
Nasdaq Capital Market symbol . . .	“CELC”

(1) The number of shares of our common stock to be outstanding after this offering is based on 7,322,050 shares of our common stock outstanding as of June 30, 2017, after giving effect to: (1) the LLC Conversion; and (2) the conversion of our unsecured convertible promissory notes into shares of common stock as described in section entitled “Description of Capital Stock—Unsecured Convertible Promissory Notes,” at the initial public offering price of \$9.50 per share. The number of shares of our common stock to be outstanding after this offering excludes:

- 442,685 shares of common stock issuable upon the exercise of options granted as of June 30, 2017, with a weighted-average exercise price of \$6.78 per share;
- 103,864 shares of common stock issuable upon the exercise of warrants outstanding as of June 30, 2017, with a weighted-average exercise price of \$7.96 per share;
- 131,675 shares of common stock issuable upon the exercise of warrants that will be issued in connection with the automatic conversion of our unsecured convertible promissory notes, with an exercise price of \$9.50 per share, as described in section titled “Description of Capital Stock—Unsecured Convertible Promissory Notes;”
- 120,000 shares of common stock issuable upon the exercise of the warrant that will be issued to the underwriter in connection with this offering, with an exercise price of \$10.45 per share; and
- 850,000 shares of our common stock reserved for future issuance under our new Celcuity Inc. 2017 Stock Incentive Plan and our new Celcuity Inc. 2017 Employee Stock Purchase Plan.

Except as otherwise indicated, all information in this prospectus assumes the following:

- our conversion to a Delaware corporation prior to the closing of this offering;
- the filing of our Delaware certificate of incorporation and adoption of our bylaws prior to the closing of this offering; and
- no exercise by the underwriter of its option to purchase additional shares of our common stock to cover over-allotments.

SUMMARY FINANCIAL DATA AND PRO FORMA FINANCIAL DATA

The following tables present, as of the dates and for the periods indicated, our selected historical financial data and certain pro forma financial data, as indicated therein. The statement of operations data for the years ended December 31, 2015 and 2016 and the balance sheet data as of December 31, 2015 and 2016 are derived from our audited financial statements that are included elsewhere in this prospectus. The summary statements of operations data for the six months ended June 30, 2016 and 2017 and the Balance Sheet data as of June 30, 2017 are derived from the unaudited condensed financial statements included in this prospectus. We have prepared the unaudited interim financial statements on the same basis as the audited financial statements and have included, in our opinion, all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair statement of financial statements set forth in those statements. Our historical results are not indicative of the results to be expected in the future and our interim results are not necessarily indicative of results to be expected for the full year ending December 31, 2017, or any other period. The unaudited pro forma adjustments are based upon available information and certain assumptions we believe are reasonable under the circumstances.

The following summary financial data should be read in conjunction with, and are qualified in their entirety by reference to, “Use of Proceeds,” “Capitalization,” “Selected Financial Data and Pro Forma Financial Data,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and the related notes included elsewhere in this prospectus.

	Years Ended December 31,		Six Months Ended June 30,	
	2015	2016	2016	2017
	(unaudited)			
Statements of Operations Data:				
Operating expenses:				
Research and development	\$ 2,011,719	\$ 3,064,762	\$ 1,412,056	\$ 2,212,629
General and administrative	250,091	263,664	131,417	386,963
Total operating expenses	2,261,810	3,328,426	1,543,473	2,599,592
Loss from operations	(2,261,810)	(3,328,426)	(1,543,473)	(2,599,592)
Other income (expense):				
Interest expense	—	—	—	(186,686)
Interest income	268	18,018	4,019	22,712
Total other income (expense)	268	18,018	4,019	(163,974)
Net loss	<u>\$(2,261,542)</u>	<u>\$(3,310,408)</u>	<u>\$(1,539,454)</u>	<u>\$(2,763,566)</u>
Net loss per share attributable to common stockholders—basic and diluted ⁽¹⁾	\$ (0.39)	\$ (0.52)	\$ (0.25)	\$ (0.43)
Weighted-average (WA) common shares outstanding used to compute net loss per unit attributable to common stock—basic and diluted ⁽¹⁾				
	<u>5,843,317</u>	<u>6,313,089</u>	<u>6,181,660</u>	<u>6,440,139</u>
Pro Forma Adjustments:⁽²⁾⁽³⁾				
Pro forma adjustment for interest on convertible notes ⁽⁴⁾		—	—	186,686
Pro forma net loss ⁽⁵⁾		<u>\$(3,310,408)</u>	<u>\$(1,539,454)</u>	<u>\$(2,576,880)</u>
WA common shares outstanding pro forma (unaudited):				
Pro forma WA common shares attributed to conversion of convertible notes ⁽⁶⁾		—	—	277,451

	Years Ended December 31,		Six Months Ended June 30,	
	2015	2016	2016	2017
			(unaudited)	
Pro forma WA common shares outstanding used to compute net loss per share attributable to common stockholders—basic and diluted ⁽⁷⁾		6,313,089	6,181,660	6,717,590
Pro forma net loss per share attributable to common stockholders—basic and diluted		\$ (0.52)	\$ (0.25)	\$ (0.38)

- (1) Net loss per share attributable to common stockholders—basic and diluted and weighted average (WA) shares of common stock outstanding are presented giving effect to the LLC Conversion described in “Certain Relationships and Related Party Transactions—LLC Conversion” and the retrospective conversion of outstanding equity units into shares of common stock at a conversion ratio of 40 units for each share of common stock. Without giving effect to the LLC Conversion, the number of units outstanding as of December 31, 2015 and 2016 and June 30, 2016 and 2017 were 233,732,667, 252,523,542, 247,266,395, and 257,604,208, respectively, and the net loss per unit attributable to common members—basic and diluted was (\$0.01) as of each such date.
- (2) In accordance with Rule 11-02(c)(2)(i) of Regulation S-X, pro forma financial data for the year ended December 31, 2015 has been omitted.
- (3) Pro forma after giving effect to the conversion of our unsecured convertible notes, which had a carrying value of \$6,575,413 as of June 30, 2017, into common stock as described in the section entitled “Description of Capital Stock—Unsecured Convertible Promissory Notes.”
- (4) As the convertible notes were considered converted at the original issuance dates in 2017, recognized interest expense of \$186,686 for the six-month period ended June 30, 2017 was removed for pro forma purposes.
- (5) Celcuity, prior to the LLC Conversion, was a limited liability company and was therefore considered a disregarded legal entity for income tax purposes. Accordingly, no provision for income taxes was included in the financial statements for the periods presented. On a pro forma basis, after giving effect to the LLC Conversion, (i) no income tax expense would be recorded as Celcuity had net losses for the applicable periods, and (ii) no income tax benefit would be recorded as any potential tax benefit would be fully offset by a valuation allowance.
- (6) The pro forma weighted average common shares attributable to conversion of our convertible notes assumes the conversion of \$8,337,500 principal amount into 877,632 shares of common stock at the beginning of the period presented, or the original issuance date, if later. The conversion of such notes is based on the initial public offering price of \$9.50 per share. The assumed pro forma conversion of the convertible notes at the original issue date during 2017 increased the weighted average common shares outstanding by 277,451 for the six month period ended June 30, 2017.
- (7) Pro forma WA common shares outstanding used to compute net loss per share attributable to common stockholders—basic and diluted is equal to the (WA) shares of common stock outstanding as of the date presented plus the pro forma WA common shares attributed to conversion of convertible notes. See notes (1) and (6) above.

	As of December 31,		As of June 30, 2017		
	2015	2016			
	Actual	Actual	Actual	Pro Forma ⁽²⁾	Pro Forma ⁽³⁾
			(unaudited)	(unaudited)	As Adjusted (unaudited)
Balance Sheet Data:					
Cash and cash equivalents	\$5,067,240	\$5,856,348	\$10,908,068	\$10,908,068	\$31,037,132
Total assets	5,300,025	6,056,977	11,686,950	11,686,950	31,514,284
Total current liabilities	283,604	445,359	776,954	776,954	500,288
Convertible notes	—	—	6,575,413	—	—
Total stockholders' equity ⁽¹⁾	5,016,421	5,611,618	4,334,583	10,909,996	\$31,013,996

- (1) Total stockholders' equity is presented after giving effect to the LLC Conversion described in "Certain Relationships and Related Party Transactions—LLC Conversion" and the retrospective conversion of outstanding equity units into shares of common stock at a conversion ratio of 40 units for each share of common stock.
- (2) Pro forma after giving effect to the conversion of our unsecured convertible notes, which had a carrying value of \$6,575,413 as of June 30, 2017, into common stock as described in the section entitled "Description of Capital Stock—Unsecured Convertible Promissory Notes," based on the initial public offering price of \$9.50 per share.
- (3) Pro forma as adjusted after giving effect to the sale of 2,400,000 shares of common stock in this offering at the initial public offering price of \$9.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

An investment in our common stock involves a high degree of risk. You should carefully read and consider the risks described below before deciding to invest in our common stock. If any of the following risks actually occur, our business, financial condition, results of operation or cash flows could be materially harmed. In any such case, the trading price of our common stock could decline and you could lose all or part of your investment. When determining whether to buy our common stock, you should also refer to the other information in this prospectus, including our financial statements and the related notes.

RISKS RELATING TO OUR BUSINESS

We have a limited operating history upon which you can evaluate us. We may never generate revenue or profit.

We are an early-stage biotechnology company that commenced activities in January 2012. We only have a limited operating history upon which you can evaluate us. Our business plan has not been tested. Since inception, we have had no revenue and have incurred significant operating losses. We have financed our operations primarily through private placements of pre-LLC Conversion common units and the issuance of convertible notes. To generate revenue and become and remain profitable, we must continue to develop and commercialize the CELx platform. To do so, we need to successfully complete our clinical trial collaboration with Genentech and the NSABP for our CELx HSF Test, continue to develop other CELx tests for other cancer sub-types and cultivate partnerships with pharmaceutical companies. We must also build operational and financial infrastructure to support commercial operations, train and manage employees, and market and sell our CELx tests (as a CDx and/or as a stand-alone test).

We may never succeed in any or all of these activities and, even if we do, we may never generate revenue that is sufficient to achieve profitability. We expect to continue to incur significant expenses and operating losses for the foreseeable future, and the net losses we incur may fluctuate significantly from quarter to quarter. Our failure to become and remain profitable would decrease the value of the company and could impair our ability to raise capital, maintain or expand our research and development efforts, expand our business, or continue our operations. A decline in the value of our company could also cause you to lose part or even all of your investment.

Our initial success is heavily dependent on the success of our CELx HSF Test.

Our business strategy is focused on attracting pharmaceutical company partnerships that provide revenue from the sale of CELx tests during clinical trials, from milestone payments during clinical trials, from sales of our CELx tests as companion diagnostics or stand-alone tests thereafter, and, potentially, from royalties on the incremental drug revenues our tests enable. Our ability to obtain such partnerships and generate such revenue depends in part on the ability of our CELx HSF Test to demonstrate the potential incremental opportunity available for pharmaceutical companies. We will not begin fielding our first prospective clinical trial for the CELx HSF Test until late-2017 and expect final results of the trial will not be available for 18 to 21 months. Success of the HSF Test trial will depend on many factors, such as successful enrollment of patients, meeting trial endpoint goals, and completing the trial in a timely manner. Our ability to complete the trial could be delayed or prevented for several reasons that are out of our control, such as the FDA withdrawing its authorization and approval to perform the study, the NSABP determining that the human and/or toxicology test results do not support continuing the trial, or participants having adverse reactions or side-effects to the drugs administered in the study. If we are unable to demonstrate that the HSF Test is suitable as a CDx for the targeted therapy, we will likely not be able to generate future revenue from our CELx HSF Test and may not be able to attract other pharmaceutical companies to partner with us for the development and commercialization of other CELx tests. Further, potential pharmaceutical company partners may delay negotiating development agreements until results of the CELx HSF Test trial are available. Even if the ultimate outcome of our CELx HSF Test trial is positive, any delays could materially and adversely affect our business.

We may not be successful in finding pharmaceutical company partners for continuing development of additional CELx tests.

We intend to develop strategic partnerships with pharmaceutical companies for developing additional CELx tests. Many of the potential partners are global, multi-billion-dollar pharmaceutical companies with

sophisticated research and development organizations and multiple priorities. We may not be successful in our efforts to establish such a strategic partnership or other alternative arrangements for our CELx tests because, among other things, our research and development pipeline may be insufficient, such tests may be deemed to be at too early of a stage of development for collaborative effort, or third parties may not view such tests as having the requisite potential to demonstrate efficacy. In addition, we may be restricted under collaboration agreements from entering into future agreements with other partners. Even if we are able to find suitable partners, we may not be successful in negotiating development agreements with such partners that provide revenue from the sale of our CELx tests to identify patients eligible for required clinical trials, milestone payments, and/or royalties on the incremental drug revenues that our tests enable. If we are unable to reach agreements with suitable strategic partners on a timely basis, on acceptable terms or at all, we may have to curtail the development of additional CELx tests, our expected revenue opportunities may be significantly smaller than expected, our business may fail, and you may lose part or even all of your investment.

While our CELx HSF Test is commercially ready, we have not attempted to market it to physicians or their patients as a stand-alone test and have no ability to determine this test or any of our other tests are currently commercially viable.

While our CELx HSF test has been analytically validated, is conducted in our CLIA certified and CAP accredited laboratory, and is currently ready for commercial use as a laboratory developed test, we have not attempted to market it to physicians or their patients. Furthermore, we have commenced only limited communications with KOLs to build awareness and credibility of our CELx diagnostic platform and CELx HSF Test. Accordingly, we have no ability to determine whether our CELx HSF Test, or any other future CELx test, will be commercially viable as a stand-alone test. We may never be successful in generating revenue from our CELx HSF Test or other CELx tests as stand-alone tests, and if we are unable to build pharmaceutical partnerships that enable us to market this and other tests as companion diagnostic tests, we may never generate any revenue, our business may fail, and you may lose part or even all of your investment.

Developing our CELx tests involves a lengthy and complex process that may not be successful.

Our CELx tests may take several years to develop from the time they are discovered to the time they are available for patient use, if ever. In order to develop additional CELx tests into commercially ready products, we need to successfully complete a variety of activities, including, among other, conducting substantial research and development, conducting extensive analytical testing, and maintaining our CLIA certified and CAP accredited laboratory. In addition, our business strategy is focused heavily on our CELx tests being sold as companion diagnostics. This will require obtaining and maintaining partnerships with pharmaceutical companies and successfully completing clinical studies that demonstrate the suitability of the applicable CELx test as a CDx for their targeted therapies.

These activities will require us to expend significant resources. Based on comparable companies in this industry, few research and development projects result in commercially viable products, and success in early clinical studies often is not replicated in later studies. At any point, we may abandon development of a product candidate for several reasons, such as a clinical validation study failing to demonstrate the prospectively defined endpoints of the study. We may also be required to expend considerable resources repeating clinical studies, which would adversely affect the timing for generating potential revenue from a new product and our ability to invest in other products in our pipeline.

Clinical trials are expensive and complex with uncertain outcomes, which may prevent or delay commercialization of our CELx tests.

For our CELx tests to become a CDx for a matching targeted therapy, we must conduct clinical trials to demonstrate that patients who have an abnormal signaling pathway, as identified by our CELx tests, respond to treatment with a matching targeted therapy. Clinical testing is expensive, difficult to design and implement, and can take many years to complete, and its outcome is inherently uncertain. As a company, we have no experience in conducting or participating in clinical trials. We cannot be certain that any future clinical trials will conclusively demonstrate that any CELx test is effective as a CDx. If our trials do not

yield positive results, we may be unable to maintain the pharmaceutical company partnerships we build or find additional partners, we may not be able to successfully commercialize our CELx tests or generate any revenue, our business may fail, and you may lose part or all of your investment.

We cannot be certain that our existing clinical trial or future clinical trials, if any, will begin or be completed on time, if at all. We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to commercialize our CELx tests, such as:

- delays in reaching, or failure to reach, agreement on acceptable clinical trial contracts or clinical trial protocols with planned trial sites and/or strategic partners;
- delay or failure in reaching agreement with the FDA or a comparable foreign regulatory authority on a trial design, in obtaining authorization from such authorities to commence the trial, and/or in complying with conditions or other requirements imposed by such regulatory authorities with respect to the trial;
- delay or failure in recruiting and enrolling suitable subjects to participate in one or more clinical trials, or with such participants completing a trial or returning for follow-up during or after the trial;
- clinical sites, investigators or other third-parties deviating from the trial protocol, failing to conduct the trial in accordance with regulatory and contractual requirements, and/or dropping out of a trial;
- regulatory imposition of a clinical hold for any of our clinical trials, where a clinical hold in a trial in one indication would result in a clinical hold for clinical trials in other indications; and
- changes in governmental regulations or administrative actions.

Significant nonclinical or clinical trial delays could prevent us from maintaining and/or developing new pharmaceutical company partnerships. Delays could also shorten any periods during which we may have the exclusive right to commercialize our CELx tests or allow our competitors to bring products to market before we do. As such, any delays could impair our ability to successfully commercialize our CELx tests and may materially and adversely affect our business, financial condition, results of operations and prospects.

Even if our CELx tests achieve positive clinical trial results, they may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If any of our potential CELx tests, including the CELx HSF Test, achieve positive clinical trial results, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success. For example, conventional genomic- or proteomic-based analyses are commonly used today to diagnose cancer and prescribe cancer medications, and physicians may continue to rely on these diagnostic tests instead of adopting the use of a CELx test. The degree of market acceptance of our CELx tests, will depend on a number of factors, including:

- their efficacy and other potential advantages compared to alternative diagnostic tests;
- our ability to offer them for sale at competitive prices;
- their convenience and ease of administration compared to alternative diagnostics;
- the willingness of the target patient population to try new diagnostics and of physicians to initiate such diagnostics;
- the strength of marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement for our diagnostic tests; and
- our ability partner with pharmaceutical companies to develop CDx programs for the new cancer sub-types we discover.

If our CELx tests do not achieve an adequate level of acceptance, we may never generate significant product revenues and we may not become profitable.

Our business, operational and financial goals may not be attainable if the market opportunities for our CELx tests or our pharmaceutical company partners are smaller than we expect. Our internal research and estimates on market opportunities have not been verified by independent sources, and neither we nor the underwriter have independently verified market and industry data from third-parties that we have relied on.

The total market opportunities that we believe exist are based on a variety of assumptions and estimates, including the number of potential CDx programs we will be able to successfully pursue, the amount of potential milestone payments that we could receive in CDx programs, the number of patients we will test in clinical trials, the price we will be able to charge for our tests and the total annual number of cancer patients with undiagnosed abnormal cell signaling. In addition, we have relied on third-party publications, research, surveys and studies for information related to determining market opportunities, including without limitation, information on the number of cancer patients and those receiving various forms of treatment, the cost of drug therapy, the amount of revenue generated from various types of drug therapy, the objective response rates of drug therapies, the number of deaths caused by cancer and the expected growth in cancer drug therapy and diagnostic markets. Our internal research and estimates on market opportunities have not been verified by independent sources, and neither we nor the underwriter have independently verified market and industry data from third-parties that we have relied on. Any or all of our assumptions and/or estimates may prove to be incorrect for several reasons, such as inaccurate reports or information that we have relied on, potential patients or providers not being amenable to using our CELx platform for diagnostic testing or such patients becoming difficult to identify and access, limited reimbursement for companion diagnostics, pricing pressure due to availability of alternative diagnostic tests, or an inability of the CELx tests' companion drugs to obtain the necessary regulatory approvals for new indications. If any or all of our assumptions and estimates prove inaccurate, we and our CDx pharmaceutical partners may not attain our business, operational and financial goals.

The expected selling price range of our CELx test is an estimate. We have not yet sold any such tests and the actual price we are able to charge may be substantially lower than our expected price range.

We have estimated the selling price range of our CELx test based on the pricing of other diagnostic tests currently available and assumptions regarding the efficacy and market acceptance of our tests. We have not yet sold our CELx tests and cannot be certain of the actual price we may be able to charge. The availability and price of our competitors' products could limit the demand and the price we are able to charge. We may not achieve our business plan if acceptance is inhibited by price competition, if pharmaceutical companies refuse to pay our expected prices for CELx tests in clinical trials, if physicians are reluctant to switch from other diagnostic tests to our CELx tests or if physicians switch to other new products or choose to reserve our CELx tests for use in limited circumstances. Furthermore, reductions in the reimbursement rate of third-party payors have occurred and may occur in the future. Each of these factors could cause our selling price to be substantially lower than expected, and we may fail to obtain revenue or become profitable.

The insurance coverage and reimbursement status of new diagnostic products is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for CELx tests could limit our ability to market those CELx tests and decrease our ability to generate revenue.

The availability and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford expensive diagnostic tests and treatments. Sales of any of our potential CELx tests will depend substantially, both in the United States and internationally, on the extent to which the costs of our CELx tests will be paid by health maintenance, managed care, and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors. Reimbursement by a payor may depend on a number of factors, including a payor's determination that the CELx tests are:

- neither experimental nor investigational;
- appropriate for the specific patient;

- cost-effective;
- supported by peer-reviewed publications; and
- included in clinical practice guidelines.

If reimbursement is not available, or is available only to a limited amount, we may not be able to successfully commercialize our CELx tests at expected levels, or potentially at all. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our research and development investment.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved diagnostic products. In the United States, the principal decisions about reimbursement for new diagnostic products and services are typically made by the Centers for Medicare & Medicaid Services, or CMS, an agency within the U.S. Department of Health and Human Services. CMS decides whether and to what extent a new product or service will be covered and reimbursed under Medicare. Private payors tend to follow CMS to a substantial degree. As such, a significant portion of our potential revenue depends on CMS approving coverage and reimbursement of our CELx tests.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe, Canada and other countries has and will continue to put pressure on the pricing and usage of diagnostic tests such as our potential CELx tests. In many countries, particularly the countries of the European Union, the prices of medical products are subject to varying price control mechanisms as part of national health systems. In these countries, pricing negotiations with governmental authorities can take considerable time. To obtain reimbursement or pricing approval in some countries, we may be required to demonstrate the cost-effectiveness of our CELx tests relative to other available diagnostic tests. The prices of products under such systems may be substantially lower than in the United States. Other countries allow companies to fix their own prices for products, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our CELx tests. Accordingly, in markets outside the United States, the reimbursement for our potential CELx tests may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profit.

Moreover, increasing efforts by governmental and third-party payors, in the United States and internationally, to cap or reduce healthcare costs may cause such organizations to limit both coverage and level of reimbursement for new products approved and, as a result, they may not cover or provide adequate payment for our potential CELx tests. The downward pressure on healthcare costs in general, particularly prescription drugs and surgical procedures and other treatments, has become very intense. We expect to experience pricing pressures in connection with the sale of any CELx tests due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative changes.

We may encounter difficulties in commercializing and marketing our products.

In order to commercialize any CELx test, we must build marketing, sales, managerial and other non-technical capabilities or make arrangements with third parties to perform these services, and we may not be successful in doing so. For each CELx test we develop, we intend to pursue development agreements with the pharmaceutical companies that provide matching targeted therapies. Once we have completed the analytical validation of a CELx test, we plan to target key opinion leaders (KOLs) to build product awareness. Once we have clinical validation data available, we expect to expand our sales and marketing efforts to target the broader market, and coordinate our go-to-market activities with those of our partner pharmaceutical companies. These activities will be expensive and time consuming and will require significant attention of our executive officers to manage. Furthermore, there is no guarantee that any new drug indications will require our CELx tests as a CDx or that any pharmaceutical company will effectively coordinate sales and marketing activities with us. Any failure or delay in these activities would adversely impact the commercialization our CELx platform, and our business, financial condition, results of operations and prospects may be materially and adversely affected.

We may encounter difficulties in managing growth, which could disrupt our operations.

To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

We face significant competition from other diagnostic companies and our operating results will suffer if we fail to compete effectively.

The diagnostic testing related industry is intensely competitive. We have competitors both in the United States and abroad, including universities and other research institutions and providers of diagnostics that focus on developing genomic or proteomic analyses of a patient's diseased cells or theranostic tests to predict specific patient responses to a drug therapy. Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and well-established marketing and sales forces. Our competitors may succeed in developing, acquiring or licensing, on an exclusive basis, products or services that are more effective or less costly than the CELx tests that we are currently developing or that we may develop. In addition, established medical technology, biotechnology and/or pharmaceutical companies may invest heavily to accelerate discovery and development of diagnostic tests that could make our CELx tests less competitive.

Our ability to compete successfully will depend largely on our ability to:

- discover and develop CELx tests for cancer sub-types that are superior to other products in the market;
- demonstrate compelling advantages in the efficacy and convenience of our CELx tests on a cost competitive basis;
- attract qualified scientific, product development and commercial personnel;
- obtain and maintain patent and other proprietary protection as necessary for our CELx platform;
- obtain required U.S. and international regulatory approvals;
- successfully collaborate with research institutions and pharmaceutical companies in the discovery, development and commercialization of our current and future CELx tests; and
- successfully expand our operations and build a sales force to support commercialization.

We may not be able to compete effectively if we are unable accomplish one or more of the these objectives.

If our sole laboratory facility becomes inoperable, we will be unable to perform our tests and our business will be harmed.

We do not have redundant laboratory facilities. We perform all of our diagnostic services in our laboratory located in Minneapolis, Minnesota. Our facility and the equipment we use to perform our tests would be costly to replace and could require substantial lead time to repair or replace. The facility may be harmed or rendered inoperable by physical damage from fire, floods, tornadoes, power loss, telecommunications failures, break-ins and similar events, which may render it difficult or impossible for us to perform our tests for some period of time. The inability to perform our tests may result in the loss of customers or harm our reputation, and we may be unable to regain those customers in the future. Although we possess insurance for damage to our property and the disruption of our business, this insurance may not be sufficient to cover all of our potential losses and may not continue to be available to us on acceptable terms, or at all.

In order to rely on a third party to perform our tests, we could only use another facility with established state licensure and CLIA accreditation under the scope of which our potential CELx tests could be performed following validation and other required procedures. We cannot assure you that we would be able to find another CLIA-certified facility willing to adopt CELx tests and comply with the required procedures, or that this laboratory would be willing to perform the tests for us on commercially reasonable terms.

We must hire and retain a qualified sales force.

Our ability to grow revenue for our CELx tests is dependent upon our ability to build an effective sales team. We do not currently have a dedicated sales force, and building one will be an expensive and time-consuming process. We face intense competition for qualified sales personnel and our inability to hire or retain an adequate number of sales representatives could limit our ability to maintain or expand our business and increase sales. Even if we are able to increase our sales force, our new sales personnel may not provide sufficient high quality service and attention to effectively market and sell our CELx platform. If we are unable to develop our marketing and sales networks or if our sales personnel do not perform as expected, we may be unable to maintain or grow our existing business and our business, financial condition, results of operations and prospects may be materially and adversely affected.

We will be dependent on our ability to attract and retain key personnel.

Our operations will be materially dependent upon the services of our officers and key employees, including Brian F. Sullivan, our Chief Executive Officer, and Dr. Lance G. Laing, our Chief Science Officer. Successful implementation of our business plan will also require the services of other consultants and additional personnel. We cannot assure you that we will be able to attract and retain such persons as employees, independent contractors, consultants or otherwise. If we are not able to attract individuals with the skills required for our business, or if we lose the services of either Mr. Sullivan or Dr. Laing, we may be unable successfully to implement our business plan.

Our inability to raise additional capital on acceptable terms in the future may limit our ability to develop and commercialize our CELx platform.

We may require additional capital to finance capital expenditures and operating expenses over the next several years as we launch our CELx platform and expand our infrastructure, commercial operations and research and development activities. We may seek to raise additional capital through equity offerings, debt financings, collaborations or licensing arrangements. Additional funding may not be available to us on acceptable terms, or at all. If we raise funds by issuing equity securities, dilution to our stockholders could result. Any equity securities issued may also provide for rights, preferences or privileges senior to those of holders of our existing securities. The incurrence of additional indebtedness or the issuance of certain equity securities could result in increased fixed payment obligations and could also include restrictive covenants, such as limitations on our ability to incur additional debt or issue additional equity, limitations on our ability to acquire or license intellectual property rights, and other operating restrictions that could adversely affect our ability to conduct our business. In the event that we enter into collaborations or licensing arrangements to raise capital, we may be required to accept unfavorable terms. If we are not able to secure additional funding when needed, we may have to delay, reduce the scope of or eliminate one or more research and development programs or selling and marketing initiatives. In addition, we may have to work with a partner on one or more of our products or market development programs, which could lower the economic value of those programs to our company.

RISKS RELATED TO OUR RELIANCE ON THIRD PARTIES

We will rely on collaboration with third parties to conduct our clinical trials, including the current trial involving the CELx HSF Test, and those third parties may not perform satisfactorily.

We will rely on third parties to conduct clinical trials for our CELx tests. For our CELx HSF Test, we are collaborating with Genentech and the NSABP to conduct a 55-patient single-arm interventional trial that is expected to begin enrolling patients in late-2017. We are funding the patient-related costs for this trial and Genentech is supplying the drugs. We will rely on NSABP to conduct our clinical trial of the CELx HSF Test, including setting up clinical sites, enrolling patients, and managing clinical data.

We expect to field additional clinical trials to evaluate new potential indications for drugs with patients identified by one of our new CELx tests. NSABP, other contract research organizations that we hire and/or pharmaceutical companies we partner with might not successfully carry out their contractual duties, meet expected deadlines, or conduct our planned clinical trials in accordance with regulatory requirements or our stated protocols. Any of them may also terminate their relationship with us for a variety of reasons. Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If we need to enter into alternative arrangements, we may not be able to complete our clinical trials and may not be able to, or may be delayed in our efforts to, successfully commercialize our potential CELx tests.

The pharmaceutical companies that we partner with may not be successful in receiving regulatory approval for drug indications or may not commercialize their companion therapies for our expected CDx programs.

While we intend to provide our pharmaceutical company partners with new patient populations for such partners' existing or investigational targeted therapies, there can be no assurances that such partners will be able to obtain regulatory approval for new indications to treat these patient populations or otherwise be successful in commercializing these new therapies. The pharmaceutical companies we partner with:

- may not meet clinical trial endpoint targets in evaluating efficacy of a targeted therapy in the patient population;
- may encounter regulatory or production difficulties that could constrain the supply of the companion therapies;
- may have difficulties gaining acceptance of the use of the companion therapies in the clinical community;
- may not pursue commercialization of any companion therapies;
- may elect not to continue or renew commercialization programs based on changes in their strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- may not commit sufficient resources to the marketing and distribution of such companion therapies; or
- may terminate their relationship with us.

Any of these factors could adversely affect our commercialization strategy, business, results of operations and financial condition.

Our instrument or reagent suppliers may fail to meet our quality requirements for the items we purchase or fail to provide a continuous supply of the items we utilize to perform our CELx tests.

We utilize highly specialized reagents and instruments to perform our CELx tests. We may be unable to find suitable replacement reagents and instruments on a timely basis, if at all. Interruption in the supply of these items or degradation in their quality could delay analytical and clinical studies, and/or render us unable to deliver CELx tests. This would interrupt sales and adversely affect our business, results of operations and financial condition.

Performance issues or price increases by our shipping carriers could adversely affect our business, results of operations and financial condition, and harm our reputation and ability to provide our CELx tests on a timely basis.

Expedited, reliable shipping is essential to our operations. Should our shipping carrier encounter delivery performance issues such as loss, damage or destruction of a sample, such occurrences may damage our reputation and lead to decreased demand for our services and increased cost and expense to our business. In addition, any significant increase in shipping rates could adversely affect our operating margins and results of operations. Similarly, strikes, severe weather, natural disasters or other service interruptions

by delivery services we use would adversely affect our ability to receive and process patient samples on a timely basis. There are only a few providers of overnight nationwide transport services, and there can be no assurance that we will be able to maintain arrangements with providers on acceptable terms, if at all.

RISKS RELATED TO GOVERNMENT REGULATION

Our CELx tests represent a novel approach to companion diagnostics, which could result in heightened regulatory scrutiny, delays in clinical development, or delays in our ability to commercialize any products.

Our unique and proprietary CELx technology is the first cancer diagnostic platform we are aware of that can detect the underlying signaling dysfunction driving a patient's cancer. Because this is a novel approach to companion diagnostics, there can be no assurance as to the length of a clinical trial period, the number of patients the FDA or another applicable regulatory authority will require to be enrolled in the trials in order to establish the safety and efficacy of our CELx tests and the companion drugs, or that the data generated in these trials will be acceptable to the FDA or another applicable regulatory authority to support marketing approval of new indications for the companion drugs. This could delay or prohibit our clinical trials and/or commercialization of our CELx tests.

If the FDA were to begin regulating our tests, we could incur substantial costs and delays associated with trying to obtain premarket clearance or approval.

Most laboratory developed tests, or LDTs, are not currently subject to FDA regulation, although reagents, instruments, software or components provided by third parties and used to perform LDTs may be subject to regulation. We believe that the CELx tests are LDT's, which is a term that describes tests that are designed and performed within a single laboratory. As a result, we believe the CELx tests are not currently subject to regulation by the FDA in accordance with the FDA's current policy of exercising enforcement discretion regarding LDTs.

Historically, the FDA has not required laboratories that furnish only LDTs to comply with the agency's requirements for medical devices (e.g., establishment registration, device listing, quality systems regulations, premarket clearance or premarket approval, and post-market controls). In mid-2014, the FDA published a Draft Guidance document describing a proposed approach for a regulatory framework for LDTs, but in late 2016, the FDA indicated it no longer intended to finalize the LDT Guidance Document at that time. It is not clear when or if the FDA will seek to alter the current LDT regulatory framework in the future. We cannot provide any assurance that FDA regulation, including premarket review, will not be required in the future for our tests, whether through additional guidance issued by the FDA, new enforcement policies adopted by the FDA or new legislation enacted by Congress. We cannot predict with certainty the timing or content of future legislation enacted or guidance issued regarding LDTs, or how it will affect our business.

If premarket review is required by the FDA at a future date or if we decide to voluntarily pursue FDA premarket review of our CELx tests, there can be no assurance that our CELx tests or any tests we may develop in the future will be cleared or approved by the FDA on a timely basis, if at all, nor can there be assurance that labeling claims will be consistent with our current claims or adequate to support continued adoption of and reimbursement for our CELx tests. If our CELx tests are allowed to remain on the market but there is uncertainty in the marketplace about our tests, if they are labeled investigational by the FDA, or if labeling claims the FDA allows us to make are more limited than we expect, reimbursement may be adversely affected and we may not be able to sell our CELx tests. Compliance with FDA regulations would increase the cost of conducting our business, and subject us to heightened regulation and scrutiny by the FDA and penalties for failure to comply with these requirements.

If we fail to obtain required federal and state laboratory licenses, we could lose the ability to perform our tests.

Clinical laboratory tests, including our CELx tests, are regulated under CLIA. CLIA is a federal law that regulates clinical laboratories that perform testing on specimens derived from humans for the purpose of providing information for the diagnosis, prevention or treatment of disease. CLIA regulations mandate specific standards for laboratories in the areas of personnel qualifications, administration, and participation in proficiency testing, patient test management and quality assurance. CLIA certification is also required in order for us to be eligible to bill state and federal healthcare programs, as well as many private third-party

payers, for any tests we launch. We will also be required to maintain state licenses in certain states to conduct testing in our laboratories. While we currently have CLIA Certification for our Minnesota laboratory, failure to maintain this certifications would adversely affect our ability to launch our CELx tests.

We generate medical waste and could face substantial liability if we violate laws with respect to the handling of medical waste.

We generate regulated medical waste in the normal course of performing our CELx tests. This subjects us to a variety of federal, state and local environmental and safety laws and regulations. Some of the regulations under the current regulatory structure provide for strict liability, holding a party potentially liable without regard to fault or negligence. We could be held liable for damages and fines as a result of our, or others', business operations should contamination of the environment or individual exposure to hazardous substances occur related to our business. We cannot predict how changes in laws or development of new regulations will affect our business operations or the cost of compliance.

Failure to comply with the HIPAA security and privacy regulations may increase our operational costs.

A portion of the data that we obtain and handle for or on behalf of our clients is considered protected health information, or PHI, subject to the Health Insurance Portability and Accountability Act of 1996, or HIPAA. Under HIPAA and our contractual agreements with our HIPAA-covered entity health plan customers, we are considered a "business associate" to those customers, and are required to maintain the privacy and security of PHI in accordance with HIPAA and the terms of our business associate agreements with our clients, including by implementing HIPAA-required administrative, technical and physical safeguards. We are also required to maintain similar business associate agreements with our subcontractors that have access to PHI of our customers in rendering services to us or on our behalf. We will incur significant costs to establish and maintain these safeguards and, if additional safeguards are required to comply with HIPAA regulations or our clients' requirements, our costs could increase further, which would negatively affect our operating results. Furthermore, we cannot guarantee that such safeguards have been and will continue to be adequate under applicable laws. If we have failed, or fail in the future, to maintain adequate safeguards, or we or our agents or subcontractors use or disclose PHI in a manner prohibited or not permitted by HIPAA, our subcontractor business associate agreements, or our business associate agreements with our customers, or if the privacy or security of PHI that we obtain and handle is otherwise compromised, we could be subject to significant liabilities and consequences.

We will also need to expend a considerable amount of resources complying with other federal, state and foreign laws and regulations. If we are unable to comply or have not complied with such laws, we could face substantial penalties or other adverse actions.

Our operations are subject, directly or indirectly, to other federal, state and foreign laws and regulations that are complex and their application to our specific products, services and relationships may not be clear and may be applied to our business in ways that we do not anticipate. Compliance with laws and regulations will require us to expend considerable resources implementing internal policies and procedures for compliance and ongoing monitoring, and will require significant attention of our management team. This will be challenging as an early-stage company with limited financial resources and human capital. These laws include, for example:

- Title XI of the Social Security Act, commonly referred to as the federal Anti-Kickback Statute, which prohibits the knowing and willful offer, payment, solicitation or receipt of remuneration, directly or indirectly, in cash or in kind, in return for or to reward the referral of patients or arranging for the referral of patients, or in return for the recommendation, arrangement, purchase, lease or order of items or services that are covered, in whole or in part, by a federal healthcare program such as Medicare or Medicaid;
- The civil False Claims Act, that forbids the knowing submission or "causing the submission" of false or fraudulent information or the failure to disclose information in connection with the submission and payment of claims for reimbursement to Medicare, Medicaid, federal healthcare programs or private health plans;

- The federal Physician Self-referral Law, commonly known as the Stark Law, which prohibits physicians from referring Medicare or Medicaid patients to providers of “designated health services” with whom the physician or a member of the physician’s immediate family has an ownership interest or compensation arrangement, unless a statutory or regulatory exception applies, and similar state equivalents that may apply regardless of payor; and
- The U.S. Foreign Corrupt Practices Act of 1977, as amended, or FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, and the USA PATRIOT Act, which among other things, prohibit companies and their employees, agents, third-party intermediaries, joint venture partners and collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector.

Many states and foreign governments have adopted similar laws and regulations. Violations of law could subject us to civil or criminal penalties, monetary fines, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and future earnings and curtailment of our operations. We could also be required to change or terminate some portions of operations or business or could be disqualified from providing services to healthcare providers doing business with government programs.

New legislation and regulations could be passed that affect our operations and result in additional risks and/or costs to our business.

From time to time, legislation is drafted, introduced and passed in Congress that could significantly change the statutory provisions governing the testing, approval, manufacturing and marketing of products that are or will be regulated by the FDA or CMS. In addition to new legislation, CMS and FDA regulations and policies are often revised or interpreted by the agencies in ways that may significantly affect our business and our products. It is impossible to predict whether further legislative changes will be enacted or FDA or CMS regulations, guidance, policies or interpretations will be changed, or what the impact of such changes, if any, may be. The 2016 presidential election and change in administration make it even more difficult to predict if and how federal regulations may change and/or federal agencies might alter their positions. Changes in laws and the development of new regulations could affect our business operations and/or the cost of compliance.

RISKS RELATED TO INTELLECTUAL PROPERTY

If we are unable to obtain and maintain intellectual property protection for our technology, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and diagnostic tests similar or identical to ours, and our ability to successfully commercialize our technology and diagnostic tests may be impaired.

Our ability to compete successfully will depend in part on our ability to obtain and enforce patent protection for our products, preserve our trade secrets and operate without infringing the proprietary rights of third parties. We have applied for patents that protect our technology. Our patent portfolio includes one U.S. patent, four pending U.S. patent applications, one pending international PCT patent application, and numerous corresponding non-U.S. patent applications. Each patent and patent application covers methods of use. However, we cannot assure you that our intellectual property position will not be challenged or that all patents for which we have applied will be granted. The validity and breadth of claims in patents involve complex legal and factual questions and, therefore, may be highly uncertain. Uncertainties and risks that we face include the following:

- our pending or future patent applications may not result in the issuance of patents;
- the scope of any existing or future patent protection may not exclude competitors or provide competitive advantages to us;
- our patents may not be held valid if subsequently challenged;
- other parties may claim that our products and designs infringe the proprietary rights of others—even if we are successful in defending our patents and proprietary rights, the cost of such litigation may adversely affect our business; and

- other parties may develop similar products, duplicate our products, or design around our patents.

The patent prosecution process is expensive and time-consuming, and we may not be able to file, prosecute, maintain, enforce or license all necessary or desirable patent applications at a reasonable cost or in a timely manner, or in all jurisdictions. We may choose not to seek patent protection for certain innovations and may choose not to pursue patent protection in certain jurisdictions, and under the laws of certain jurisdictions, patents or other intellectual property rights may be unavailable or limited in scope. It is also possible that we will fail to identify patentable aspects of our discovery and nonclinical development output before it is too late to obtain patent protection.

The patent position of companies like ours is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. The U.S. Patent and Trademark Office, or U.S. PTO, has not established a consistent policy regarding the breadth of claims that it will allow in medical technology patents. In addition, the laws of foreign jurisdictions may not protect our rights to the same extent as the laws of the United States. For example, India and China do not allow patents for methods of treating the human body. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our owned or licensed patents or pending patent applications, or that we were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued that protect our technology or CELx tests, in whole or in part, or which effectively prevent others from commercializing competitive technologies and diagnostic tests. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection.

Moreover, we may be subject to a third-party pre-issuance submission of prior art to the U.S. PTO or patent offices in foreign jurisdictions, or become involved in opposition, derivation, reexamination, inter partes review, post-grant review or interference proceedings challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology and compete directly with us, without payment to us, or result in our inability to commercialize CELx platform without infringing third-party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to develop or commercialize current or future CELx tests.

Even if our owned patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our owned patents by developing similar or alternative technologies or products in a non-infringing manner.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and product candidates, or limit the duration of the patent protection of our technology and potential diagnostic tests. Given the amount of time required for the development, testing and regulatory review of new diagnostic tests, patents protecting such tests might expire before or shortly after such candidates are commercialized. As a result, our owned patent portfolio may not provide us with sufficient rights to exclude others from commercializing diagnostic tests similar or identical to ours.

Patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents.

On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted and may also affect patent litigation. The

U.S. PTO recently developed new regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first to file provisions, only became effective on March 16, 2013. Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition. Depending on future actions by the U.S. Congress, the federal courts, and the U.S. PTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. In addition, there may be patent law reforms in foreign jurisdictions that could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents in those foreign jurisdictions.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability, and the ability of our collaborators, to develop, manufacture, market and sell our CELx tests and use our proprietary technologies without infringing the proprietary rights of third parties. There is considerable intellectual property litigation in the medical technology, biotechnology and pharmaceutical industries. We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our CELx platform, including interference or derivation proceedings before the U.S. PTO and similar bodies in other jurisdictions. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future.

If we are found to infringe a third party's intellectual property rights, we could be required to obtain a license from such third party to continue developing and marketing our CELx platform and CELx tests. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our CELx platform or force us to cease some of our business operations, which could materially harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

We may be subject to claims by third parties asserting that our employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Our current and future employees may have been previously employed at universities or other biotechnology, diagnostic technology or pharmaceutical companies, including our competitors or potential competitors and strategic partners. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that these employees or we have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. Litigation may be necessary to defend against these claims.

In addition, while it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management.

Any lawsuits relating to infringement of intellectual property rights necessary to defend ourselves or enforce our rights will be costly and time consuming, and could be unsuccessful.

Because competition in our industry is intense, competitors may infringe or otherwise violate our issued patents, patents of our licensors or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time consuming, and could distract our technical and management personnel from their normal responsibilities. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents. In addition, in a patent infringement proceeding, a court may decide that a patent of ours is invalid or unenforceable, in whole or in part, construe the patent's claims narrowly or refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly. We may also elect to enter into license agreements in order to settle patent infringement claims or to resolve disputes prior to litigation, and any such license agreements may require us to pay royalties and other fees that could be significant. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure.

If we are not able to prevent disclosure of our trade secrets and other proprietary information, the value of our CELx platform could be significantly diminished.

We rely on trade secret protection to protect our interests in proprietary know-how and in processes for which patents are difficult to obtain or enforce. We may not be able to protect our trade secrets adequately. We have a policy of requiring our consultants, advisors and strategic partners to enter into confidentiality agreements and our employees to enter into invention, non-disclosure and non-compete agreements. However, no assurance can be given that we have entered into appropriate agreements with all parties that have had access to our trade secrets, know-how or other proprietary information. There is also no assurance that such agreements will provide meaningful protection of our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure of information. Furthermore, we cannot provide assurance that any of our employees, consultants, contract personnel, or strategic partners, either accidentally or through willful misconduct, will not cause serious damage to our programs and/or our strategy, for example by disclosing important trade secrets, know-how or proprietary information to our competitors. It is also possible that our trade secrets, know-how or other proprietary information could be obtained by third parties as a result of breaches of our physical or electronic security systems. Any disclosure of confidential data into the public domain or to third parties could allow our competitors to learn our trade secrets and use the information in competition against us. In addition, others may independently discover our trade secrets and proprietary information. Any action to enforce our rights is likely to be time consuming and expensive, and may ultimately be unsuccessful, or may result in a remedy that is not commercially valuable. These risks are accentuated in foreign countries where laws or law enforcement practices may not protect proprietary rights as fully as in the United States. Any unauthorized disclosure of our trade secrets or proprietary information could harm our competitive position.

RISKS RELATING TO OUR COMMON STOCK AND THIS OFFERING

You will suffer immediate and substantial dilution.

The initial public offering price of our common stock will be substantially higher than the net tangible book value per share of our common stock after giving effect to this offering. 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. To the extent shares subsequently are issued under outstanding options or other equity awards or equity securities, you will incur further dilution. Based on the initial public offering price of \$9.50 per share, you will experience immediate dilution of \$6.31 per share, representing the difference between our pro forma net tangible book value per share, after giving effect to this offering, and the initial public offering price. See "Dilution."

After this offering, our executive officers, directors and principal stockholders, if they choose to act together, will continue to have the ability to control all matters submitted to stockholders for approval.

Our executive officers and directors, combined with our stockholders who each owned more than 5% of our outstanding common stock before this offering will, in the aggregate, beneficially own shares

representing approximately 52% of our capital stock based on 9,722,050 shares of common stock outstanding on a pro forma basis. As a result, if these stockholders were to choose to act together, they would be able to control all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these persons, if they choose to act together, would control the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. This concentration of ownership control may:

- delay, defer or prevent a change in control;
- make changes to our management and the board of directors challenging for other stockholders; or
- impede a merger, consolidation, takeover or other business combination involving us that other stockholders may desire or may result in you obtaining a premium for your shares.

Our internal control over financial reporting does not currently meet the standards required by Section 404 of the Sarbanes-Oxley Act, and failure to achieve and maintain effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act could have a material adverse effect on our business and stock price.

We previously have not been required to maintain internal control over financial reporting in a manner that meets the standards of publicly traded companies required by Sections 404(a) or 404(b) of the Sarbanes-Oxley Act. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. We are not currently in compliance with, and we cannot be certain when we will be able to implement the requirements of Section 404(a). We may encounter problems or delays in implementing any changes necessary to make a favorable assessment of our internal control over financial reporting. If we cannot favorably assess the effectiveness of our internal control over financial reporting, investors could lose confidence in our financial information and the price of our common stock could decline.

Additionally, the existence of any material weakness or significant deficiency would require management to devote significant time and incur significant expense to remediate any such material weaknesses or significant deficiencies and management may not be able to remediate any such material weaknesses or significant deficiencies in a timely manner. The existence of any material weakness in our internal control over financial reporting could also result in errors in our financial statements that could require us to restate our financial statements causing us to fail to meet our reporting obligations and cause stockholders to lose confidence in our reported financial information, all of which could materially and adversely affect us.

Provisions in our corporate charter documents and under Delaware law could make an acquisition of our company, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our certificate of incorporation and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control of our company that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our board of directors will be responsible for appointing the members of our management team, 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. Among other things, these provisions:

- allow the authorized number of our directors to be changed only by resolution of our board of directors;
- limit the manner in which stockholders can remove directors from our board of directors;

- establish advance notice requirements for stockholder proposals that can be acted on at stockholder meetings and nominations to our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by our stockholders by written consent;
- limit who may call stockholder meetings;
- authorize our board of directors to issue preferred stock without stockholder approval, which could be used to institute a “poison pill” that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by our board of directors; and
- require the approval of the holders of at least two-thirds of the votes that all our stockholders would be entitled to cast to amend or repeal specified provisions of our certificate of incorporation or bylaws.

Moreover, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Any of these provisions of our charter documents or Delaware law could, under certain circumstances, depress the market price of our common stock. See “Description of Capital Stock.”

An active trading market for our common stock may not develop.

Prior to this offering, there has been no public market for our common stock. The initial public offering price for our common stock was determined through arms-length negotiations with the underwriter. Although our common stock was approved for listing on The Nasdaq Capital Market, an active trading market for our shares may never develop or be sustained following this offering. If an active market for our common stock does not develop, it may be difficult for you to sell shares you purchase in this offering at a favorable price or at all.

The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock in this offering.

Our stock price is likely to be volatile. The stock market in general and the market for smaller medical technology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your common stock at or above the initial public offering price. The market price for our common stock may be influenced by many factors, including:

- the success of competitive products or technologies;
- results of planned clinical trials of our CELx HSF Test or other CELx tests may develop in the future;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to any of our CELx tests or clinical development programs;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- operating results that fail to meet expectations of securities analysts that cover our company;
- variations in our financial results or those of companies that are perceived to be similar to us;

- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical, biotechnology and medical technology sectors;
- general economic and market conditions; and
- the other factors described in this “Risk Factors” section.

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

Our stock price is likely to be volatile, and in the past companies that have experienced volatility in the market price of their stock have been subject to an increased incidence of 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.

If securities or industry analysts do not publish research or reports about our business, or publish negative reports 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. We do not have any control over these analysts. There can be no assurance that analysts will cover us or provide favorable coverage. If one or more of the analysts who cover us downgrade our stock or change their opinion of our stock, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

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

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section entitled “Use of Proceeds,” and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Our management could spend the net proceeds from this offering in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our CELx platform. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

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

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and may remain an emerging growth company for up to five years. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting of Section 404(b) of the Sarbanes-Oxley Act;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation; 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.

We have taken advantage of reduced reporting burdens in this prospectus. In particular, in this prospectus, we have not included all of the executive compensation related information that would be required if we were not an emerging growth company. We cannot predict whether investors will find our common stock less attractive if we 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.

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

As a public company, and particularly after we are no longer an emerging growth company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of The Nasdaq Capital Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly.

We are evaluating these rules and regulations, and cannot predict or estimate the amount of additional costs we may incur or the timing of such costs. These rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Pursuant to Section 404 of the Sarbanes-Oxley Act, or Section 404, we will first be required to furnish a report by our management on our internal control over financial reporting for the year ending December 31, 2019. As discussed above, if we cease to be an emerging growth company, we will be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm as required by Section 404(b). To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404. If we identify one or more material weaknesses, it could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements.

Since we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, stock price appreciation, if any, will be your sole source of gain.

We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, appreciation, if any, in the market price of our common stock will be your sole source of gain for the foreseeable future.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and other reports filed by the company from time to time with the Securities and Exchange Commission, or the SEC, contain or may contain forward-looking statements and information that are based upon beliefs of and information currently available to management as well as estimates and assumptions made by management. When used in the filings, the words “anticipate,” “believe,” “could,” “estimate,” “expect,” “future,” “intend,” “plan,” “predict,” “may,” “should,” “will,” “would” or the negative variation of these terms and similar expressions as they relate to the company or management identify forward-looking statements.

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

- our plans to develop and commercialize our CELx platform and CELx tests for patients with cancer and our expectations regarding the various cancer sub-types our CELx tests will identify;
- any perceived advantage of our CELx platform and CELx tests as compared to traditional molecular or other diagnostic tests, including without limitation, the ability of our platform and tests to help physicians treat their patients’ cancers or to identify new patient populations not diagnosable with currently available diagnostic tests;
- our expected first-mover advantage in providing products to culture living tumor cells on a commercial scale, or the sustainability of our competitive advantages;
- the size and growth potential of the markets for our CELx platform, and our ability to serve those markets;
- the rate and degree of market acceptance, both in the United States and internationally, and clinical utility of our diagnostic platform and tests;
- our ability to partner with and generate revenue from pharmaceutical partners and physicians, and the market opportunity for HER2 therapies and other CELx programs for our pharmaceutical partners as a result of our CELx platform;
- the success of competing tests that are or may become available;
- the ability of our CELx platform and tests to impact clinical trials by our pharmaceutical partners, such as streamlining FDA approval of targeted therapeutics;
- the success, cost and timing of our CELx platform development activities and planned clinical trials, as well as our reliance on collaboration with third parties to conduct our clinical trials;
- our commercialization, marketing and manufacturing capabilities and strategy;
- expectations regarding federal, state, and foreign regulatory requirements and developments, such as potential FDA regulation of our CELx platform and CELx tests, our operations, as well as our laboratory;
- our plans with respect to pricing in the United States and internationally, and our ability to obtain reimbursement for CELx tests, including expectations as to our ability or the amount of time it will take to achieve successful reimbursement from third-party payors, such as commercial insurance companies and health maintenance organizations, and government insurance programs, such as Medicare and Medicaid;
- our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our CELx platform and CELx tests;
- our expectations with respect to our facility needs;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- future agreements with third parties in connection with the commercialization of our CELx diagnostic platform and tests;

- our expectations regarding our ability to obtain and maintain intellectual property protection for CELx platform and approach;
- our expectations regarding conversion from a Minnesota limited liability company to a Delaware corporation and the operation, independence, and composition of our board of directors;
- our ability to attract and retain key scientific or management personnel;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act;
- the requirements of being a public company;
- our expectations regarding having our stock listed on The Nasdaq Capital Market; and
- our anticipated use of the net proceeds from this offering.

Other risks, uncertainties and factors, including those discussed under “Risk Factors,” could cause our actual results to differ materially from those projected in any forward-looking statements we make. Should one or more of these risks or uncertainties materialize, or should the underlying assumptions prove incorrect, actual results may differ significantly from those anticipated, believed, estimated, expected, intended or planned.

Although management believes that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Except as required by applicable law, including the securities laws of the United States, the company does not intend to update any of the forward-looking statements to conform these statements to actual results.

USE OF PROCEEDS

We estimate that our net proceeds from the sale of shares of our common stock in this offering will be approximately \$20.1 million, or approximately \$23.3 million if the underwriter exercises its option in full to purchase additional shares from us, based on the initial public offering price of \$9.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to obtain additional capital to support our research and development activities, clinical studies, and commercial activities. We currently intend to use the net proceeds of this offering as follows:

- approximately \$10.0 million to fund additional research and development for discovery of new cancer sub-types and development and validation of new CELx tests;
- approximately \$5.0 million for clinical trials to support clinical claims;
- approximately \$2.6 million to fund development of operational processes and capital expenditures; and
- approximately \$2.5 million for working capital and other general corporate purposes.

The net proceeds are intended to support our research and development and efforts, the development of our operational processes, and the launch of our business development activities to pharmaceutical companies. The expected use of the net proceeds from the offering represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, we cannot predict with any certainty all of the particular uses for the net proceeds or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual expenditures and the extent of product development and commercialization may vary significantly depending on numerous factors, including the status, results and timing of the clinical trial for the CELx HSF Test that we intend to commence in late-2017 and our current nonclinical studies for additional diagnostic tests, as well as any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

Pending their use as described above, we plan to invest the net proceeds in short-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or guaranteed obligations of the U.S. government. You will not have an opportunity to evaluate the economic, financial or other information on which we base our decisions regarding the use of these proceeds.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. 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 and do not intend to declare or pay any cash dividends in the foreseeable future. As a result, you will likely need to sell your shares of common stock to realize a return on your investment, and you may not be able to sell your shares at or above the price you paid for them. Payment of cash dividends, if any, in the future will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth the cash and cash equivalents and our capitalization as of June 30, 2017, of:

- on an actual basis after retrospective adjustments to give effect to the LLC Conversion effected on September 15, 2017 and described in “Certain Relationships and Related Party Transactions—LLC Conversion;”
- on a pro forma basis giving effect to the conversion of our unsecured convertible promissory notes into common stock as described in “Description of Capital Stock—Unsecured Convertible Promissory Notes,” based on the initial public offering price of \$9.50 per share; and
- on a pro forma as adjusted basis giving effect to the sale of 2,400,000 shares of common stock in this offering at the initial public offering price of \$9.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table in conjunction with the information contained in “Use of Proceeds,” “Selected Financial Data and Pro Forma Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” as well as the financial statements and the notes thereto included elsewhere in this prospectus.

	As of June 30, 2017		
	Actual	Pro Forma Note Conversion	Pro Forma As Adjusted
(In thousands, except for share and per share data; unaudited)			
Cash, cash equivalents and marketable securities (excluding restricted cash)	\$ 10,908	\$ 10,908	\$ 31,037
Convertible notes ⁽¹⁾	6,575	—	—
Stockholder’s Equity			
Common stock, \$0.001 par value ⁽²⁾	6	7	10
Additional paid-in capital ⁽¹⁾	15,424	21,998	42,100
Accumulated deficit	(11,095)	(11,095)	(11,095)
Total stockholders’ equity	4,335	10,910	31,014
Total Capitalization	\$ 10,910	\$ 10,910	\$ 31,014

The number of shares of our common stock issued and outstanding as set forth in the table above excludes:

- 442,685 shares of common stock issuable upon the exercise of options granted as of June 30, 2017, with a weighted-average exercise price of \$6.78 per share;
- 103,864 shares of common stock issuable upon the exercise of warrants outstanding as of June 30, 2017, with a weighted-average exercise price of \$7.96 per share;
- 881,911 shares of common stock issuable upon the exercise of warrants issued in connection with the automatic conversion of our unsecured convertible promissory notes, with an exercise price of \$9.50 per share, as described in section titled “Description of Capital Stock—Unsecured Convertible Promissory Notes;”
- 120,000 shares of common stock issuable upon the exercise of the warrant that will be issued to the underwriter in connection with this offering, with an exercise price equal to \$10.45 per share; and
- 850,000 shares of our common stock reserved for future issuance under our new Celcuity Inc. 2017 Stock Incentive Plan and our new Celcuity Inc. 2017 Employee Stock Purchase Plan.

- (1) In April and May 2017, we sold unsecured convertible promissory notes with an aggregate principal amount of \$8,337,500, which upon the closing of this offering will convert into 881,911 shares of

common stock and warrants to purchase an additional 131,675 shares of common stock. We incurred \$885,130 of third party offering costs related to the sale of the unsecured convertible promissory notes. In addition, we issued a warrant to the placement agent with a fair market value of \$286,999. The net proceeds of \$7,452,370 were allocated \$6,388,655 and \$1,063,715 to the unsecured convertible promissory notes and warrants (additional paid-in capital), respectively. A total debt discount of \$1,948,846 will be amortized as interest expense over the life of the convertible notes. Upon conversion of the unsecured convertible promissory notes at the closing of this offering, the net carrying value of the unsecured convertible promissory notes at that time will be converted to common stock (par value) and additional paid-in capital. For pro forma statements of operations data, see the section entitled “Selected Financial Data and Pro Forma Financial Data” of this prospectus.

- (2) As of June 30, 2017, we had 6,440,139 shares issued and outstanding after giving effect to the LLC Conversion; 7,332,050 shares issued and outstanding (Pro Forma (Note Conversion)); and 9,722,050 shares issued and outstanding (Pro Forma As Adjusted).

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. Net tangible book value per share of our common stock is determined at any date by subtracting our total liabilities from the amount of our total tangible assets (total assets less intangible assets) and dividing the difference by the number of shares of our common stock deemed to be outstanding at that date.

Our historical net tangible book value as of June 30, 2017 was approximately \$4.0 million, or \$0.63 per share of common stock, based on 6,440,139 shares of common stock outstanding as of such date after giving effect to the LLC Conversion. Investors participating in this offering will incur immediate and substantial dilution.

After giving effect to the conversion of our unsecured convertible promissory notes into common stock in connection with this offering as described in “Description of Capital Stock—Unsecured Convertible Promissory Notes,” with the initial public offering price of \$9.50 per share, our pro forma as adjusted net tangible book value as of June 30, 2017 would have been approximately \$10.6 million, or \$1.45 per share.

After further giving effect to (1) the pro forma adjustment described above; and (2) our receipt of approximately \$20.1 million of estimated net proceeds, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, from our sale of common stock in this offering at the initial public offering price of \$9.50 per share, our pro forma as adjusted net tangible book value as of June 30, 2017, would have been approximately \$31.0 million, or \$3.19 per share. This amount represents an immediate increase in net tangible book value of \$1.74 per share of our common stock to existing equityholders and an immediate dilution in net tangible book value of \$6.31 per share of our common stock to new investors purchasing shares of common stock in this offering.

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

Initial public offering price per share	\$9.50
Historical net tangible book value per share as of June 30, 2017 after giving effect to the LLC Conversion	\$0.63
Pro forma increase in net tangible book value per share attributable to conversion of unsecured convertible promissory notes	<u>\$0.82</u>
Pro forma net tangible book value per share as of June 30, 2017	\$1.45
Pro forma increase in net tangible book value per share attributable to new investors	<u>\$1.74</u>
Pro forma as adjusted net tangible book value per share after this offering	<u>\$3.19</u>
Dilution per share to new investors purchasing common stock in this offering	<u><u>\$6.31</u></u>

If the underwriter exercises its option to purchase additional shares in full in this offering, the pro forma as adjusted net tangible book value after this offering would be \$3.39 per share, the increase in pro forma net tangible book value to existing stockholders would be \$1.94 per share, and the dilution per share to new investors would be \$6.11 per share.

The following table summarizes, as of June 30, 2017, after giving effect to the pro forma adjustments noted above, the differences between the number of shares purchased from us, the total consideration paid to us, and the average price per share paid to us by existing stockholders and by new investors purchasing shares in this offering, before deducting underwriting discounts and commissions and estimated offering expenses payable by us, at the initial public offering price of \$9.50 per share.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	7,322,050	75.3%	\$23,081,433	50.3%	\$3.15
New investors	2,400,000	24.7	22,800,000	49.7	9.50
Total	9,722,050	100%	\$45,881,433	100%	\$4.72

The number of shares of our common stock outstanding immediately following this offering is based on 6,440,139 shares of our common stock outstanding as of June 30, 2017 and giving effect to the pro forma transactions described above. This number excludes:

- 442,685 shares of common stock issuable upon the exercise of options granted as of June 30, 2017, with a weighted-average exercise price of \$6.78 per share;
- 103,864 shares of common stock issuable upon the exercise of warrants outstanding as of June 30, 2017, with a weighted-average exercise price of \$7.96 per share;
- 131,675 shares of common stock issuable upon the exercise of warrants that will be issued in connection with the automatic conversion of our unsecured convertible promissory notes, with an exercise price of \$9.50 per share, as described in section titled “Description of Capital Stock—Unsecured Convertible Promissory Notes;”
- 120,000 shares of common stock issuable upon the exercise of the warrant that will be issued to the underwriter in connection with this offering, with an exercise price of \$10.45 per share; and
- 850,000 shares of our common stock reserved for future issuance under our new Celcuity Inc. 2017 Stock Incentive Plan and our new Celcuity Inc. 2017 Employee Stock Purchase Plan.

If the underwriter exercises its option to purchase additional shares in full, the percentage of shares of common stock held by existing stockholders will decrease to approximately 72.6% of the total number of shares of our common stock outstanding after this offering, and the number of shares held by new investors will increase to 2,760,000, or approximately 27.4% of the total number of shares of common stock outstanding after the offering.

To the extent that any of the outstanding options or warrants to purchase shares of our common stock are exercised, new investors may experience further dilution. In addition, we may issue additional shares of common stock, other equity securities or convertible debt securities in the future, which may cause further dilution to new investors in this offering.

SELECTED FINANCIAL DATA AND PRO FORMA FINANCIAL DATA

The following tables present, as of the dates and for the periods indicated, our selected historical financial data and certain pro forma financial data, as indicated therein. The statement of operations data for the years ended December 31, 2015 and 2016 and the balance sheet data as of December 31, 2015 and 2016 are derived from our audited financial statements that are included elsewhere in this prospectus. The summary statements of operations data for the six months ended June 30, 2016 and 2017 and the Balance Sheet data as of June 30, 2017 are derived from the unaudited condensed financial statements included in this prospectus. We have prepared the unaudited interim financial statements on the same basis as the audited financial statements and have included, in our opinion, all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair statement of financial statements set forth in those statements. Our historical results are not indicative of the results to be expected in the future and our interim results are not necessarily indicative of results to be expected for the full year ending December 31, 2017, or any other period. The unaudited pro forma adjustments are based upon available information and certain assumptions we believe are reasonable under the circumstances.

You should read this information together with our financial statements and the related notes, as well as the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included elsewhere in this prospectus.

	Years Ended December 31,		Six Months Ended June 30,	
	2015	2016	2016	2017
	(unaudited)			
Statements of Operations Data:				
Operating expenses:				
Research and development	\$ 2,011,719	\$ 3,064,762	\$ 1,412,056	\$ 2,212,629
General and administrative	250,091	263,664	131,417	386,963
Total operating expenses	2,261,810	3,328,426	1,543,473	2,599,592
Loss from operations	(2,261,810)	(3,328,426)	(1,543,473)	(2,599,592)
Other income (expense):				
Interest expense	—	—	—	(186,686)
Interest income	268	18,018	4,019	22,712
Total other income (expense)	268	18,018	4,019	(163,974)
Net loss	<u>\$(2,261,542)</u>	<u>\$(3,310,408)</u>	<u>\$(1,539,454)</u>	<u>\$(2,763,566)</u>
Net loss per share attributable to common stockholders—basic and diluted ⁽¹⁾	\$ (0.39)	\$ (0.52)	\$ (0.25)	\$ (0.43)
Weighted-average (WA) common shares outstanding used to compute net loss per unit attributable to common stock—basic and diluted ⁽¹⁾	5,843,317	6,313,089	6,181,660	6,440,139
Pro Forma Adjustments:⁽²⁾⁽³⁾				
Pro forma adjustment for interest on convertible notes ⁽⁴⁾		—	—	186,686
Pro forma net loss ⁽⁵⁾		<u>\$(3,310,408)</u>	<u>\$(1,539,454)</u>	<u>\$(2,576,880)</u>
WA common shares outstanding pro forma (unaudited):				
Pro forma WA common shares attributed to conversion of convertible notes ⁽⁶⁾		—	—	277,451
Pro forma WA common shares outstanding used to compute net loss per share attributable to common stockholders—basic and diluted ⁽⁷⁾		6,313,089	6,181,660	6,717,590
Pro forma net loss per share attributable to common stockholders—basic and diluted		\$ (0.52)	\$ (0.25)	\$ (0.38)

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- (1) Net loss per share attributable to common stockholders—basic and diluted and weighted average (WA) shares of common stock outstanding are presented giving effect to the LLC Conversion described in “Certain Relationships and Related Party Transactions—LLC Conversion” and the retrospective conversion of outstanding equity units into shares of common stock at a conversion ratio of 40 units for each share of common stock. Without giving effect to the LLC Conversion, the number of units outstanding as of December 31, 2015 and 2016 and June 30, 2016 and 2017 were 233,732,667, 252,523,542, 247,266,395, and 257,604,208, respectively, and the net loss per unit attributable to common members—basic and diluted was (\$0.01) as of each such date.
 - (2) In accordance with Rule 11-02(c)(2)(i) of Regulation S-X, pro forma financial data for the year ended December 31, 2015 has been omitted.
 - (3) Pro forma after giving effect to the conversion of our unsecured convertible notes, which had a carrying value of \$6,575,413 as of June 30, 2017, into common stock as described in the section entitled “Description of Capital Stock—Unsecured Convertible Promissory Notes.”
 - (4) As the convertible notes were considered converted at the original issuance dates in 2017, recognized interest expense of \$186,686 for the six-month period ended June 30, 2017 was removed for pro forma purposes.
 - (5) Celcuity, prior to the LLC Conversion, was a limited liability company and was therefore considered a disregarded legal entity for income tax purposes. Accordingly, no provision for income taxes was included in the financial statements for the periods presented. On a pro forma basis, after giving effect to the LLC Conversion, (i) no income tax expense would be recorded as Celcuity had net losses for the applicable periods, and (ii) no income tax benefit would be recorded as any potential tax benefit would be fully offset by a valuation allowance.
 - (6) The pro forma weighted average common shares attributable to conversion of our convertible notes assumes the conversion of \$8,337,500 principal amount into 877,632 shares of common stock at the beginning of the period presented, or the original issuance date, if later. The conversion of such notes is based on the initial public offering price of \$9.50 per share. The assumed pro forma conversion of the convertible notes at the original issue date during 2017 increased the weighted average common shares outstanding by 277,451 for the six month period ended June 30, 2017.
 - (7) Pro forma WA common shares outstanding used to compute net loss per share attributable to common stockholders—basic and diluted is equal to the (WA) shares of common stock outstanding as of the date presented plus the pro forma WA common shares attributed to conversion of convertible notes. See notes (1) and (6) above.

	As of December 31,		As of June 30, 2017		
	2015	2016			
	Actual	Actual	Actual	Pro Forma ⁽²⁾	Pro Forma ⁽³⁾ As Adjusted
			(unaudited)	(unaudited)	(unaudited)
Balance Sheet Data:					
Cash and cash equivalents	\$5,067,240	\$5,856,348	\$10,908,068	\$10,908,068	\$31,037,132
Total assets	5,300,025	6,056,977	11,686,950	11,686,950	31,514,284
Total current liabilities	283,604	445,359	776,954	776,954	500,288
Convertible notes	—	—	6,575,413	—	—
Total stockholders' equity ⁽¹⁾	5,016,421	5,611,618	4,334,583	10,909,996	\$31,013,996

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- (1) Total stockholders' equity is presented after giving effect to the LLC Conversion described in "Certain Relationships and Related Party Transactions—LLC Conversion" and the retrospective conversion of outstanding equity units into shares of common stock at a conversion ratio of 40 units for each share of common stock.
- (2) Pro forma after giving effect to the conversion of our unsecured convertible notes, which had a carrying value of \$6,575,413 as of June 30, 2017, into common stock as described in the section entitled "Description of Capital Stock—Unsecured Convertible Promissory Notes," based on the initial public offering price of \$9.50 per share.
- (3) Pro forma as adjusted after giving effect to the sale of 2,400,000 shares of common stock in this offering at the initial public offering price of \$9.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

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

The following discussion should be read in conjunction with the historical financial statements and the related notes thereto filed with this prospectus. The Company has retrospectively adjusted the financial statements to reflect the LLC Conversion. Accordingly, the following adjustments have been made in this section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations:" (1) every 40 member units have been converted to one share of common stock, (2) the number of member units underlying each member unit option or member unit warrant have been proportionately decreased by the same ratio as the LLC Conversion and relabeled as stock options and warrants, and the exercise price of each outstanding member unit option and warrant has been proportionately increased so that the aggregate exercise price payable upon exercise shall remain unchanged, and (3) the financial statement line items presented have been adjusted to reflect the LLC Conversion.

This discussion and analysis and other parts of this prospectus contain forward-looking statements based upon our current beliefs, plans and expectations that involve risks, uncertainties and assumptions, such as statements regarding our objectives, intentions and projections. 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 "Special Note Regarding Forward-Looking Statements."

OVERVIEW

We are a cellular analysis company that is discovering new cancer sub-types and commercializing diagnostic tests designed to significantly improve the clinical outcomes of cancer patients treated with targeted therapies. Our proprietary CELx diagnostic platform is the only commercially ready technology we are aware of that uses a patient's living tumor cells to identify the specific abnormal cellular process driving a patient's cancer and the targeted therapy that best treats it. We believe our CELx platform provides two important improvements over traditional molecular diagnostics. First, molecular diagnostics can only provide a snapshot of the genetic mutations present in a patient's tumor because they analyze dead cells. Using dead cells prevents molecular diagnostics from analyzing in real-time the dynamic cellular activities, known as cell signaling, that regulate cell proliferation or survival. Cancer can develop when certain cell signaling activity becomes abnormal. Since genetic mutations are often only weakly correlated to the cell signaling activity driving a patient's cancer, a molecular diagnostic is prone to providing an incomplete diagnosis. CELx tests overcome this limitation by measuring real-time cell signaling activity in a patient's living tumor cells. When a CELx test detects abnormal signaling activity, a more accurate diagnosis of the patient's cancer driver is obtained. Second, molecular diagnostics can only estimate the probability of a patient's potential drug response based on a statistical analysis of the drug's clinical trial results. Instead of this indirect estimate of drug response, CELx tests directly measure the effectiveness of a targeted therapy in a patient's living tumor cells. This enables physicians to confirm that the therapeutic matching the patient's cancer driver is functional in the patient's tumor cells before prescribing it, which significantly increases the likelihood of a positive clinical outcome.

Our first analytically validated and commercially ready test using our CELx platform, the CELx HSF Test, diagnoses two new sub-types of HER2-negative breast cancer that traditional molecular diagnostics cannot detect. Our internal studies show that approximately 20% of HER2-negative breast cancer patients have abnormal HER2 signaling activity similar to levels found in HER2+ breast cancer cells. As a result, these HER2-negative patients have undiagnosed HER2-driven breast cancer and would be likely to respond to the same anti-HER2 targeted therapies only HER2+ patients receive today. Our CELx HSF Test is targeting HER2-negative breast cancer patients receiving treatment, which, based on 2016 estimates from the NCI SEER Review and a May 2017 publication by the AACR, includes approximately 278,000 patients annually in the U.S. In late-2017, we will be fielding a prospective clinical trial in collaboration with Genentech and the NSABP to evaluate the efficacy of Genentech's HER2 targeted therapies in patients with these newly identified cancer sub-types. We expect interim results 10 to 12 months from this trial after the first patient is enrolled in late 2017 and final results in 18 to 21 months.

In addition to our CELx tests for HER2-negative breast cancer, we are developing CELx tests to diagnose 14 new potential cancer sub-types we have discovered in breast, lung, colon, ovarian, kidney, bladder and hematological cancers. Approved or investigational drugs are currently available to treat these new potential cancer sub-types. We expect to launch these additional tests on a staggered basis over the next few years while continuing our research to identify additional new cancer sub-types.

We have not generated any revenue from sales to date, and we continue to incur significant research and development and other expenses related to our ongoing operations. As a result, we are not and have never been profitable and have incurred losses in each period since our inception in 2012. For the years ended December 31, 2016 and 2015, we reported a net loss of \$3.3 million and \$2.3 million, respectively. As of June 30, 2017, we had an accumulated deficit of \$11.1 million, which includes \$0.9 million of non-cash charges, consisting of approximately \$0.7 million for equity-based compensation and approximately \$0.2 million for non-cash interest expense. As of June 30, 2017, we had cash and cash equivalents of \$10.9 million.

FINANCIAL OVERVIEW

Components of Operating Results

Revenue

To date, we have not generated any revenue. Initially, our ability to generate revenue will depend primarily upon our ability to obtain partnership agreements with pharmaceutical companies to provide companion diagnostics for such pharmaceutical partners' existing or investigational targeted therapies. We expect these partnerships to generate significant revenue from the sale of tests to identify patients eligible for clinical trials, from milestone payments, and, potentially, from royalties on the incremental drug revenues our tests enable. Once a new drug indication is received that requires use of our companion diagnostic to identify eligible patients, we expect to generate revenues from sales of tests to treating physicians.

Research and Development

Since our inception, we have primarily focused on research and development of our CELx platform, development and validation of our CELx HSF Test, and research related to the discovery of new cancer sub-types. Research and development expenses primarily include:

- employee-related expenses related to our research and development activities, including salaries, benefits, travel and stock-based compensation expenses;
- laboratory supplies;
- consulting fees paid to third parties;
- clinical trial costs;
- facilities expenses; and
- legal costs associated with patent applications.

Internal and external research and development costs are expensed as they are incurred. As we initiate clinical trials to evaluate efficacy of targeted therapies in cancer patients selected with one of our CELx tests, the proportion of research and development expenses allocated to external spending will grow at a faster rate than expenses allocated to internal expenses. For the years ended December 31, 2016 and 2015, we incurred research and development expenses of \$3.1 million and \$2.0 million, respectively. For the six months ended June 30, 2017, we incurred research and development expenses of \$2.2 million.

Conducting a significant amount of research and development is central to our business model. We plan to increase our research and development expenses for the foreseeable future as we seek to discover new cancer sub-types and to develop and validate additional CELx tests to diagnose such sub-types. We also expect to incur increased expenses to support companion diagnostic business development activities with pharmaceutical companies as we develop additional CELx tests. Timelines and costs to develop and validate new CELx tests may differ materially from expectations.

General and Administrative

General and administrative expenses consist primarily of salaries and related benefits related to our executive, finance and support functions. Other general and administrative expenses include travel expenses for our general and administrative personnel and professional fees for auditing, tax, and legal services. We anticipate that our general and administrative expenses will increase in future periods, reflecting both increased costs in connection with the potential future commercialization of CELx tests, an expanding infrastructure, and increased professional fees associated with being a public reporting company.

Sales and Marketing

Selling and marketing expenses consist primarily of professional and consulting fees related to these functions. Though we have incurred immaterial sales and marketing expenses to date as we continue to focus primarily on the development of our CELx platform and corresponding CELx tests, we expect to begin to incur increased selling and marketing expenses in anticipation of the commercialization of our CELx HSF Test. These increased expenses are expected to include payroll-related costs as we add employees in the commercial departments, costs related to the initiation and operation of our sales and distribution network and marketing related costs.

Interest Expense

Interest expense primarily consists of the amortization of debt discount and debt financing costs related to the issuance of our unsecured convertible promissory notes.

Interest Income

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

RESULTS OF OPERATIONS

Comparison of the Years Ended December 31, 2015 and 2016:

	Years Ended December 31,		Increase (Decrease)	
	2015	2016	\$	%
Operating expenses:				
Research and development	\$ 2,011,719	\$ 3,064,762	\$ 1,053,043	52%
General and administrative	250,091	263,664	13,573	5%
Total operating expenses	2,261,810	3,328,426	1,066,616	47%
Loss from operations	(2,261,810)	(3,328,426)	(1,066,616)	47%
Interest income	268	18,018	17,750	6,623%
Net loss	<u><u>\$(2,261,542)</u></u>	<u><u>\$(3,310,408)</u></u>	<u><u>\$(1,048,866)</u></u>	<u><u>46%</u></u>

Research and Development

For the year ended December 31, 2016, our total research and development expenses increased \$1.05 million, or 52%, to \$3.06 million from \$2.01 million for the prior year. The increase primarily resulted from a \$0.8 million increase in employee-related expenses, including equity-based compensation, to support development of our CELx platform, validation studies of our CELx HSF Test, business development activities, and a \$0.2 million increase in laboratory supplies to support research and development projects.

General and Administrative

For the year ended December 31, 2016, our total general and administrative expenses increased \$0.01 million, or 5%, to \$0.26 million, from \$0.25 million for the prior year. The increase in general and administrative expenses primarily resulted from increases in non-personnel related costs, including increases in property and casualty insurance, of \$0.01 million for the year ended December 31, 2016.

Interest Income

For the year ended December 31, 2016, interest income increased by approximately \$0.02 million over the prior year. The increase resulted from interest earned on our cash and cash equivalents from the \$7.5 million of proceeds of a financing that closed in December 2015 and May 2016.

Comparison of Six Months Ended June 30, 2016 and 2017:

	Six Months Ended June 30,		Increase (Decrease)	
	2016	2017	\$	%
	(unaudited)			
Operating expenses:				
Research and development	\$ 1,412,056	\$ 2,212,629	\$ 800,573	57%
General and administrative	131,417	386,963	255,546	194%
Total operating expenses	1,543,473	2,599,592	1,056,119	68%
Loss from operations	(1,543,473)	(2,599,592)	(1,056,119)	68%
Other income (expense):				
Interest expense	—	(186,686)	(186,686)	n/a
Interest income	4,019	22,712	18,693	465%
Total other income (expense)	4,019	(163,974)	(167,993)	4,180%
Net loss	<u>\$ (1,539,454)</u>	<u>\$ (2,763,566)</u>	<u>\$ (1,224,112)</u>	<u>80%</u>

Research and Development

For the six months ended June 30, 2017, our total research and development expenses increased \$0.8 million, or 57%, to \$2.2 million from \$1.4 million for the prior year period. The increase primarily resulted from an increase in employee-related expenses, including equity-based compensation, to support development of our CELx platform, validation studies of our CELx HSF Test, start-up clinical trial costs, and business development activities.

General and Administrative

For the six months ended June 30, 2017, our total general and administrative expenses increased \$0.26 million, or 194%, to \$0.39 million, from \$0.13 million for the prior year period. The increase in general and administrative expenses primarily resulted from increases of \$0.13 million in equity-based compensation and \$0.06 million in professional accounting and audit fees for the six months ended June 30, 2017.

Interest Expense

For the six months ended June 30, 2017, interest expense increased \$0.2 million over the same period in the prior year. The increase consisted of \$0.2 million of non-cash amortization of debt discount and debt financing costs and accrued interest related to the issuance of our unsecured convertible promissory notes.

Interest Income

For the six months ended June 30, 2017, interest income increased \$0.02 million over the same period in the prior year. The increase resulted from interest earned on our cash and cash equivalents.

LIQUIDITY AND CAPITAL RESOURCES

Since our inception, we have incurred losses and cumulative negative cash flows from operations. Through June 30, 2017, we have raised an aggregate of \$13.7 million from the sale of membership units of Celcuity LLC and \$7.5 million from the issuance of unsecured convertible promissory notes, which have been the primary source of funds for our operations since inception. As of June 30, 2017, our cash and cash equivalents were \$10.9 million and we had an accumulated deficit of \$11.1 million.

We expect that our research and development and general and administrative expenses will increase as we continue to develop our CELx platform and additional CELx tests, conduct research related to the discovery of new cancer sub-types, conduct clinical trials, pursue other business development activities, and become a public reporting company. We will also start to incur sales and marketing expenses as we commercialize our CELx HSF Test. We expect to use a portion of the net proceeds from this offering, in combination with our existing cash and cash equivalents, to fund our research and development expenses, capital expenditures, working capital, sales and marketing expenses, and general corporate expenses, as well as for the increased costs associated with being a public company. The amount by which we increase our research and development and other expenses will be dependent upon the net proceeds from this offering and cannot currently be estimated.

Based on our current business plan, we believe the net proceeds from this offering, together with our current cash and cash equivalents, will be sufficient to meet our anticipated cash requirements for at least 24 months following this offering.

If our available cash balances and net proceeds from this offering are insufficient to satisfy our currently anticipated liquidity requirements, including potential costs associated with delays in obtaining partnership agreements with pharmaceutical companies or other risks described in this prospectus, we may need to raise additional capital. We may also seek to raise additional capital beyond the currently anticipated amount to expand our business, pursue strategic investments, and take advantage of financing or other opportunities that we believe to be in the best interests of the company and our stockholders. Additional capital may be raised through the sale of common or preferred equity or convertible debt securities, entry into debt facilities or other third-party funding arrangements. The sale of equity and convertible debt securities may result in dilution to our stockholders and those securities may have rights senior to those of our common shares. Agreements entered into in connection with such capital raising activities could contain covenants that would restrict our operations or require us to relinquish certain rights. Additional capital may not be available on reasonable terms, or at all. These risks are discussed more fully in the section of this prospectus entitled “Risk Factors.”

Cash Flows

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

	Years Ended December 31,		Six Months Ended June 30,	
	2015	2016	2016	2017
			(unaudited)	
Net cash provided by (used in):				
Operating activities	\$(1,978,780)	\$(2,888,288)	\$(1,402,893)	\$(2,209,733)
Investing activities	(78,982)	(40,903)	(29,863)	(165,851)
Financing activities	4,802,394	3,718,299	3,718,300	7,427,304
Net increase in cash and cash equivalents	\$ 2,744,632	\$ 789,108	\$ 2,285,544	\$ 5,051,720

Operating Activities

Net cash used in operating activities in all periods resulted primarily from our net losses adjusted for non-cash charges.

The net cash used in operating activities was \$2.0 million for the year ended December 31, 2015, and consisted primarily of a net loss of \$2.3 million adjusted for non-cash items including depreciation of \$0.06 million and stock-based compensation of \$0.06 million and an increase in accounts payable of \$0.16 million. The net cash used in operating activities was \$2.9 million for the year ended December 31, 2016, and consisted primarily of a net loss of \$3.3 million adjusted for non-cash items including depreciation of \$0.07 million and stock-based compensation expense of \$0.2 million.

The net cash used in operating activities was \$1.4 million for the six months ended June 30, 2016, and consisted primarily of a net loss of \$1.5 million adjusted for non-cash items including depreciation of \$0.04

million and stock-based compensation expense of \$0.04 million. The net cash used in operating activities was \$2.2 million for the six months ended June 30, 2017 and consisted primarily of a net loss of \$2.8 million and working capital changes of \$0.1 million adjusted for \$0.65 million of non-cash items, including depreciation of \$0.05 million, stock-based compensation expense of \$0.4 million and interest expense of \$0.2 million.

Investing Activities

Net cash used in investing activities for the years ended December 31, 2015 and 2016 was \$0.08 million and \$0.04 million, respectively, and consisted of purchases of property and equipment. Net cash used in investing activities for the six months ended June 30, 2016 and 2017 was \$0.03 million and \$0.17 million, respectively, and consisted of purchases of property and equipment.

Financing Activities

Net cash provided by financing activities for the year ended December 31, 2015 was \$4.8 million and reflects the net proceeds from the sale of membership units of the Celcuity LLC to certain investors. Net cash provided by financing activities for the year ended December 31, 2016 was \$3.7 million and reflects the net proceeds from the sale of membership units of Celcuity LLC to certain investors. Net cash provided by financing activities for the six months ended June 30, 2016 was \$3.7 million and reflects the net proceeds from the sale of membership units of Celcuity LLC to certain investors. Net cash provided by financing activities for the six months ended June 30, 2017 was \$7.4 million and reflects the net proceeds from the issuance of unsecured convertible promissory notes and member warrants to certain investors of \$7.5 million, reduced by \$0.03 million for deferred transaction costs related to this offering.

OFF-BALANCE SHEET ARRANGEMENTS

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

RECENT ACCOUNTING PRONOUNCEMENTS

From time to time new accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies and adopted by us as of the specified effective date. Unless otherwise discussed in Note 1 to our audited financial statements included elsewhere in this prospectus, we believe that the impact of recently issued standards that are not yet effective will not have a material impact on our financial position or results of operations upon adoption.

CRITICAL ACCOUNTING POLICIES AND USE OF ESTIMATES

Our management's discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or Generally Accepted Accounting Principles (GAAP). The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported expenses during the reporting periods. These items are monitored and analyzed by us for changes in facts and circumstances, and material changes in these estimates could occur in the future. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances; the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Changes in estimates are reflected in reported results for the period in which they become known. Actual results may differ materially from these estimates.

While our significant accounting policies are more fully described in Note 1 to our financial statements included elsewhere in this prospectus, we believe that the following accounting policies are critical to the process of making significant judgments and estimates in the preparation of our financial statements and understanding and evaluating our reported financial results.

Stock-Based Compensation

We issue stock-based awards to employees and non-employees, generally in the form of stock options. We account for our stock-based awards in accordance with FASB Accounting Standards Codification, or ASC, Topic 718, *Compensation—Stock Compensation*, or ASC 718. ASC 718 requires all stock-based payments to employees, including grants of employee stock options and modifications to existing stock options, to be recognized in the statements of operations based on their fair values. We account for stock-based awards to non-employees in accordance with FASB ASC Topic 505-50, *Equity-Based Payments to Non-Employees*, which requires the fair value of the award to be re-measured at fair value as the award vests. We recognize the compensation cost of stock-based awards on a straight-line basis over the vesting period of the award for employees and non-employees, which is generally four years. Compensation expense related to our stock-based awards is subject to a number of estimates, including the estimated volatility and underlying fair value of our common stock as well as the estimated life of the awards. For a detailed description of how we estimate fair value for purposes of option grants and the methodology used in measuring stock-based compensation expense, see “Stock-Based Compensation and Common Stock Valuation” below. Following the completion of this offering, stock option values will partially be determined based on the market price of our common stock on The Nasdaq Capital Market.

STOCK-BASED COMPENSATION AND COMMON STOCK VALUATION

Stock-Based Compensation

We estimate the fair value of our stock-based awards to employees and non-employees using the Black-Scholes option pricing model, which requires the input of highly subjective assumptions, including, among others, (a) the expected volatility of our stock, (b) the expected term of the award, (c) the risk-free interest rate, (d) expected dividends, and (e) the fair value of our common stock on the date of grant. Due to the lack of a public market for the trading of our common stock and a lack of company-specific historical and implied volatility data, we have based our estimates of expected volatility on the historical volatility of a group of publicly traded companies in the life sciences and biotechnology industries generally in a similar stage of development as ourselves. For these analyses, we have selected companies that we consider broadly comparable to our Company and with historical share price information sufficient to meet the expected life of the stock-based awards. We compute the historical volatility data using the daily closing prices for the selected companies’ shares during the equivalent period of the calculated expected term of our stock-based awards. We will continue to apply this methodology until a sufficient amount of historical information regarding the volatility of our own stock price becomes available. For options granted to employees in 2015 and 2016, we determined the expected term based on the simplified method in accordance with Securities and Exchange (SEC) Staff Accounting Bulletins Nos. 107 and 110 as the Company’s shares are not publicly traded. The risk-free interest rates for periods within the expected life of the option are based on the U.S. Treasury Yield Curve in effect during the period the options were granted.

We have computed the fair value of employee and non-employee stock options at date of grant using the following weighted-average assumptions:

	Years Ended December 31,		Six Months Ended June 30,	
	2015	2016	2016	2017
Expected term (in years)	6.25 – 10.00	6.25 – 10.00	6.25 – 10.00	6.25 – 10.00
Volatility rate	72%	75%	72%	75%
Risk-free interest rate	1.98%	2.00%	2.00%	2.00%
Expected dividend yield	0%	0%	0%	0%

Stock-based compensation for employees and non-employees was allocated as outlined below:

	Years Ended December 31,		Six Months Ended June 30,	
	2015	2016	2016	2017
Research and development	\$56,507	\$187,307	\$36,301	\$294,189
General and administrative	—	—	—	128,627
Total	<u>\$56,507</u>	<u>\$187,307</u>	<u>\$36,301</u>	<u>\$422,816</u>

As of June 30, 2017, total unrecognized compensation expense was \$1.3 million and the weighted-average remaining requisite service period for such expense was 1.63 years. We expect the impact of our stock-based compensation expense for stock options granted to employees and non-employees to grow in future periods due to the potential increases in the value of our common stock and in headcount.

Common Stock Valuations

Prior to September 15, 2017, we were a private limited liability company with no public market for our common stock. Therefore, our board of governors determined the fair value of our common stock based on the most recent price of common stock sold to investors in arm's length transactions.

For valuations after the completion of this offering, our board of directors will determine the fair value of each share of underlying common stock based on the closing price of our common stock on the date of grant, as reported on The Nasdaq Capital Market.

Stock Option Grants

The following table summarizes unit options granted from January 1, 2015 through June 30, 2017:

Date of Issuance	Number of Shares of Common Stock Underlying Stock Options Granted	Exercise Price Per Share	Fair Value Per Share on Grant Date
Quarter 1, 2015	37,500	\$3.60	\$3.60
Quarter 2, 2015	4,525	\$3.60	\$3.60
Quarter 3, 2015	4,500	\$3.60	\$3.60
Quarter 4, 2015	5,250	\$3.60	\$3.60
Quarter 4, 2015	500	\$7.60	\$7.60
Quarter 2, 2016	169,750	\$7.60	\$7.60
Quarter 3, 2016	6,063	\$7.60	\$7.60
Quarter 4, 2016	14,250	\$7.60	\$7.60
Quarter 1, 2017	3,750	\$7.60	\$7.60
Quarter 2, 2017	144,400	\$8.40	\$7.60

The intrinsic value of all outstanding options as of June 30, 2017 was \$0.5 million based on the estimated fair value of our common stock of \$7.60 per share, of which approximately \$0.4 million related to vested options and approximately \$0.1 million related to unvested options.

NET OPERATING LOSS CARRYFORWARDS

We were originally organized as a Minnesota limited liability company and converted to a Delaware corporation on September 15, 2017. As a result, none of the net operating losses incurred from inception through the date of the conversion will carry forward to the stockholders of Celcuity Inc.

JOBS ACT

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth

company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period, and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies that are not emerging growth companies.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a smaller reporting company, we are not required to provide disclosure pursuant to this item.

PRESENTATION OF FINANCIAL INFORMATION

We prepare our financial statements in accordance with GAAP. In the preparation of these financial statements, we are required to make estimates and assumptions that affect the reported amounts of assets, liabilities, costs and expenses and related disclosures. To the extent that there are material differences between these estimates and actual results, our financial condition or operating results would be affected. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. We refer to accounting estimates of this type as critical accounting policies and estimates, which we discuss above under the heading “Critical Accounting Policies and Use of Estimates.”

LEGAL PROCEEDINGS

From time to time we may be involved in disputes or litigation relating to claims arising out of our operations. We are not currently a party to any legal proceedings that could reasonably be expected to have a material adverse effect on our business, financial condition and results of operations.

BUSINESS

OVERVIEW

We are a cellular analysis company that is discovering new cancer sub-types and commercializing diagnostic tests designed to significantly improve the clinical outcomes of cancer patients treated with targeted therapies. Our proprietary CELx diagnostic platform is the only commercially ready technology we are aware of that uses a patient's living tumor cells to identify the specific abnormal cellular process driving a patient's cancer and the targeted therapy that best treats it. We believe our CELx platform provides two important improvements over traditional molecular diagnostics. First, molecular diagnostics can only provide a snapshot of the genetic mutations present in a patient's tumor because they analyze dead cells. Using dead cells prevents molecular diagnostics from analyzing in real-time the dynamic cellular activities, known as cell signaling, that regulate cell proliferation or survival. Cancer can develop when certain cell signaling activity becomes abnormal. Since genetic mutations are often only weakly correlated to the cell signaling activity driving a patient's cancer, a molecular diagnostic is prone to providing an incomplete diagnosis. CELx tests overcome this limitation by measuring real-time cell signaling activity in a patient's living tumor cells. When a CELx test detects abnormal signaling activity, a more accurate diagnosis of the patient's cancer driver is obtained. Second, molecular diagnostics can only estimate the probability of a patient's potential drug response based on a statistical analysis of the drug's clinical trial results. Instead of this indirect estimate of drug response, CELx tests directly measure the effectiveness of a targeted therapy in a patient's living tumor cells. This enables physicians to confirm that the therapeutic matching the patient's cancer driver is functional in the patient's tumor cells before prescribing it, which significantly increases the likelihood of a positive clinical outcome. We have one U.S. patent, four pending U.S. patent applications, one pending PCT patent application, as well as numerous corresponding non-U.S. patent applications covering our diagnostic approach using cell signaling analysis in living patient cells to guide treatment of patients with targeted therapies.

Our first analytically validated and commercially ready test using our CELx platform, the CELx HSF Test, diagnoses two new sub-types of HER2-negative breast cancer that traditional molecular diagnostics cannot detect. Our internal studies show that approximately 20% of HER2-negative breast cancer patients have abnormal HER2 signaling activity similar to levels found in HER2+ breast cancer cells. As a result, these HER2-negative patients have undiagnosed HER2-driven breast cancer and would be likely to respond to the same anti-HER2 targeted therapies only HER2+ patients receive today. Our CELx HSF Test is targeting HER2-negative breast cancer patients receiving treatment, which, based on 2016 estimates from the NCI SEER Review and a May 2017 publication by the AACR, includes approximately 278,000 patients annually in the U.S. We estimate the annual U.S. market opportunity for this first test alone is approximately \$1.1 billion, assuming a test price of \$4,000, which is in line with prices for complex molecular diagnostic tests and is the low end of our planned selling price range of \$4,000 to \$7,000 per test.

As a CDx, we estimate our CELx HSF Test could potentially drive approximately \$4.0 billion of new annual U.S. revenue for HER2 therapies. This assumes HER2-negative breast cancer patients diagnosed with abnormal HER2 signaling by our CELx HSF test, roughly 20% of all HER2-negative breast cancer patients, or 55,000 patients annually, are treated with HER2 therapies costing approximately \$73,000 per patient. The per patient therapy cost assumed is in line with the cost of Herceptin[®] and Perjeta[®], the current standard of care HER2 drug treatment regimen that, according to Genentech at the time of launching Perjeta[®] in 2012, had a wholesale price of \$10,900 per month. We believe this creates significant financial motivation for pharmaceutical companies to partner with us. We also believe that having an analytically validated and commercially ready diagnostic platform is attractive to potential pharmaceutical company partners as it will enable them to use our diagnostic tests immediately after receiving the regulatory approvals required to sell their drug therapies to the newly identified patient populations identified by our CDx.

Once our CELx HSF Test was analytically validated and became commercially ready, we sought opportunities to collaborate with pharmaceutical companies that owned HER2 drugs. Our efforts resulted in a collaboration with Genentech and the NSABP to field a prospective clinical trial to evaluate the efficacy of Genentech's HER2 targeted therapies in patients with these newly identified cancer sub-types. We expect interim results 10 to 12 months from this trial after the first patient is enrolled in late 2017 and final results in 18 to 21 months. We believe a successful outcome of this collaboration will demonstrate the suitability of

our CELx HSF Test as a CDx for HER2 therapies and support our activities to attract other pharmaceutical company partnerships.

In addition to the two new breast cancer sub-types our CELx HSF Test diagnoses, we discovered 14 new potential cancer sub-types in breast, lung, colon, ovarian, kidney, bladder and hematological cancers. Based on 2016 estimates from the NCI SEER Review and 2017 data available from the ACS, we estimate that approximately 880,000 patients are treated annually in the U.S. for one of these cancer types. Approved or investigational drugs are currently available to treat each of these new potential cancer sub-types. CELx tests for these additional cancer sub-types are in various stages of development, and we expect them to become commercially ready on a staggered basis over the next few years. The development process for these additional CELx tests will mirror the process used to develop our CELx HSF test. This process includes completion of internal animal, verification, training set, and validation studies. As new CELx tests become commercially ready, we expect to initiate collaborations with pharmaceutical companies to help them obtain new drug indications for the new cancer sub-types our tests identify. The resulting total annual addressable test market, defined as the 880,000 cancer patients we are developing CELx tests for, is approximately \$3.5 billion, assuming a price of \$4,000 per test. In addition, we will continue our research to identify additional new cancer sub-types and to develop the corresponding CELx tests to diagnose them.

The need for more complete cancer diagnoses is significant. The complexity and dynamic nature of cancer makes it difficult to determine the underlying cellular activity driving the disease. Molecular tests are used to identify genetic mutations and select targeted therapies, but the overall impact of those tests on patient outcomes has fallen far short of expectations, primarily due to two factors. First, molecular tests provide a static and limited genetic profile of a patient's tumor, and, therefore, cannot measure dynamic disease activity. These tests rely on statistical correlations to diagnose patients, and when a genetic mutation is only weakly correlated to oncogenic-related cellular dysfunction, a high number of false positive diagnoses will result. With patient response rates to therapies targeting a genetic mutation typically less than 50%, and in some cases, only 10% to 20%, there is significant need for an alternative approach. Second, many cancers lack a genetic biomarker to guide treatment. For those patients, the cellular dysfunction responsible for their cancer goes undiagnosed, which means they are less likely to receive a potentially beneficial targeted therapy. Thus, current molecular tests have demonstrated only a limited ability to diagnose the specific cellular dysfunction that is driving most patients' cancer.

Our CELx platform addresses the need for better cancer diagnostic tests using two complementary technologies that represent a significant departure from molecular-based analyses. Unlike molecular tests that use fixed or lysed (dead) cells and can only measure the static composition of a cell, our CELx platform measures real-time signaling activity in a patient's live tumor cells. This enables us to: (1) identify the cellular signaling dysfunction driving a patient's cancer; and (2) confirm whether the matching targeted therapy is functional in the patient's cells. We perform our CELx tests in our CLIA-certified and CAP-accredited laboratory in Minneapolis, Minnesota.

Our platform, comprised of our internally developed cell microenvironment and cell signaling quantification technologies, allows for more accurate diagnoses and the discovery of new cancer sub-types:

- **Cell microenvironment.** Culturing living tumor cells poses three primary challenges. First, there is typically only a small amount of patient tumor tissue available. Second, the tumor cells often die once they are removed from the tumor tissue. Third, tumor cells that do survive are difficult to maintain. Moreover, when conventional cell culture approaches are used it can often take more than two months to prepare a test sample and the success rate is typically less than 50%. Due to these challenges, the pharmaceutical industry principally relies on widely available immortalized or genetically modified cancer cell lines, which are easily maintained and proliferate indefinitely at predictable rates. While these properties are useful for drug discovery purposes, that usefulness has minimized incentives to transfer patient tumor cell culturing technologies to the clinical setting. Our proprietary cell microenvironment technologies were designed to overcome these challenges and provide a testable cell sample from a patient tumor specimen as small as 20 milligrams in 10 to 14 days for more than 90% of the patient tumor specimens we receive.
- **Dynamic cell signaling quantification.** We analyze the signaling pathway activity of live patient tumor cells using a biosensor that converts the dynamic cellular response to pathway activators or

pathway inhibitors to a measurable electrical signal in real-time. To determine the activity of a specific signaling pathway, an activating agent specific to a pathway receptor is used to turn on the pathway and a corresponding inhibitory agent specific to the pathway receptor is used to turn signaling off. Thus, our tests allow us to identify both the signaling pathway abnormalities driving a patient's cancer and to confirm whether a matching targeted therapy may prove beneficial.

We believe our CELx platform will fundamentally change the standard-of-care many cancer patients receive. Patients with the newly identified cancer sub-types we have discovered have oncogenic pathways that are signaling abnormally, and, we believe, may respond positively to a matching targeted therapy. By identifying patients with a new cancer sub-type, each CELx test will create, in effect, a proprietary patient population that molecular diagnostics cannot identify.

Our initial commercial strategy is to partner with pharmaceutical companies to provide companion diagnostics for the pharmaceutical partners' existing or investigational targeted therapies. We expect such partnerships to involve collaboration on clinical trials, regulatory submissions, and commercialization activities. We will initiate activities to pursue partnerships as our CELx tests become commercially ready and can be matched with a potential partner's targeted therapies. Our commercial-related efforts to date have focused on seeking partnerships for our CELx HSF test, which became commercially ready as a laboratory developed test after it was analytically validated in 2016. We expect to seek pharmaceutical partnerships for a variety of different targeted therapies in other solid tumor types as we are conducting our initial clinical trial with Genentech and the NSABP.

We believe our CELx CDx tests will expand the matching drug's market size because they can facilitate approval of new drug indications that a pharmaceutical company would not otherwise be able to obtain.

We expect that successful pharmaceutical company partnerships will generate significant revenue from the sale of tests to identify patients eligible for clinical trials, from milestone payments, and, potentially, from royalties on the incremental drug revenues our tests enable. A key requirement for success of these partnerships will be clinical trial results that demonstrate the advantages of using a CELx test as a companion diagnostic. Once a new drug indication is received that requires use of our CDx to identify eligible patients, we will offer our tests directly to treating physicians and coordinate go-to-market strategies with our partner. This coordination of commercialization strategies will allow us to significantly leverage the sales, marketing and reimbursement resources of our pharmaceutical partner, unlike traditional molecular diagnostic companies.

OUR VALUE PROPOSITION

We believe we offer a clear and compelling value proposition to the key healthcare stakeholders:

- **Patients & Providers—Improved patient outcomes.** Our CELx tests provide a more accurate diagnosis of a patient's cancer driver and an assessment of a matching targeted therapy's effectiveness in blocking the cellular dysfunction. This will enable physicians to match more precisely the targeted therapy they use to treat their patients. We believe this will increase the percentage of patients responding to the drug, improving overall patient outcomes significantly.
- **Pharma—Increased revenue & optimized clinical trials.** CELx tests can significantly increase the revenue potential for many existing targeted therapies by identifying entirely new pools of patients potentially responsive to their therapy. For some targeted therapies, we estimate a CELx test could double the number of patients approved to receive treatment, thus driving billions of dollars in incremental sales. Also, by providing more precise selection of patients, our CELx tests can increase the odds a clinical trial meets its trial endpoint, greatly enhancing the likelihood the drug will obtain FDA approval for a new indication. In addition, according to an ARK Invest publication dated August 2016, companion diagnostics that increase the response rates of a drug can reduce Phase 3 clinical trial size as much as ten-fold and costs as much as 60%.
- **Payors—Lower costs per responsive patient.** By providing more precise cancer diagnoses and driving higher drug response rates, we will significantly reduce the money spent on drugs that do not benefit patients. Many targeted therapies cost more than \$50,000 per treatment and only benefit a small fraction of patients receiving them. Calculating drug costs on a cost-per-responsive

patient, and not just cost-per-treated patient, highlights the true cost of targeted therapies and the expense associated with low drug response rates. For instance, a \$50,000 targeted therapy with a 30% response rate costs \$167,000 per responsive patient; however, that same drug would only cost \$83,000 per responsive patient if the response rate was 60%.

OUR COMPETITIVE STRENGTHS

We have a number of key strengths that enhance our ability to achieve our mission and build a successful company:

- **First mover.** We are the first company that we are aware of to launch diagnostic tests that measure the signaling pathway activity in a patient's live tumor cells, which we believe gives us a significant first mover advantage.
- **High barriers to entry.** Our issued and pending patents, as well as our proprietary information and trade secrets, give us a strong intellectual property position that we believe creates a significant barrier to entry for potential competitors.
- **Broad range of applications for our platform.** We can develop tests for a wide range of signaling pathways and a wide range of cancer types. This allows us to build a deep new product pipeline that creates multiple paths to build a large and profitable business.
- **Multi-billion-dollar addressable market.** The broad range of pathways and cancer tissues we can test with our CELx platform enables us to initially target up to approximately 880,000 cancer patients per year, creating a nearly \$3.5 billion addressable market for our CELx tests based on our expected selling price of at least \$4,000 per test.
- **Diverse revenue streams including pharma partnerships.** We anticipate generating significant revenue from CDx pharmaceutical partners, including revenue from the sale of tests to identify patients eligible for clinical trials, milestone payments, and potentially, from royalties on the incremental drug revenues our tests enable. Our most significant revenue opportunity comes from ongoing sales of CELx tests to physicians during the commercialization stage of the CDx.
- **Strong senior leadership team.** Our founders and senior leaders have a proven track record of success building, operating and selling several successful companies. We have deep and highly relevant and complementary diagnostic, scientific, product development, and commercialization experience that has enabled us to establish market leadership positions for the companies we previously led.

OUR PLATFORM ADVANTAGES

Our unique and proprietary CELx functional cellular analysis technology represents a major shift from the diagnostic industry's reliance on molecular profiling to characterize a patient's cancer sub-type. Our goal is to leverage our technology to build a durable competitive advantage that enables us to improve outcomes for a significant percentage of cancer patients.

Our CELx platform advantages include:

- **Powerful cancer sub-type discovery tool.** We have already discovered 16 new potential cancer sub-types that are not currently diagnosed and treated with a matching targeted therapy. These sub-types are characterized by the dysfunctional signaling pathway activity our CELx tests identify. By identifying new cancer sub-types, we are creating new patient populations to which pharmaceutical companies can offer new and existing drug therapies.
- **Direct patient-specific assessment of disease status.** Even though the response rates for many targeted therapeutics are low, for those patients who do respond, their outcomes can be improved significantly. The problem is matching the patient to the right drug. Our platform overcomes this problem by directly identifying whether an oncogenic signaling pathway is abnormally active in a patient's cells. This provides the most complete assessment available today of the intracellular

activity driving a patient's cancer. Existing genomic tests typically can only provide a determination whether cancer is present and an assessment of molecular mutations that may or may not be associated with the patient's cancer driver.

- **Direct measurement of matching drug effectiveness.** An important advantage of the CELx platform is its ability to quantify the amount of signaling dysfunction that a matching targeted therapy can inhibit in an individual patient's cancer cells. This allows us to evaluate whether there are inherent drug resistance mechanisms that would prevent the therapy from functioning in the patient's tumor cells. Molecular tests cannot provide this evaluation.
- **Improved response rates.** We believe a patient population will have a higher response rate to a matching targeted therapy when it is diagnosed with a CELx test than with a molecular biomarker. By first identifying whether dysfunctional signaling is present and then confirming that a matching targeted therapy can inhibit the dysfunction, a CELx test eliminates the two primary variables that confound patient response to targeted therapy signaling: the presence or absence of the disease and the drug not functioning as intended. A molecular test provides insight on neither of these variables in most cases.
- **Identify drug responsive proprietary patient cohorts.** There are large numbers of cancer patients who lack a genetic biomarker to guide treatment. For these patients, the cellular dysfunction driving the cancer goes undiagnosed, thus excluding such patients from receiving a potentially beneficial targeted therapy. We believe our CELx tests will enable us to identify new proprietary patient populations not currently diagnosable with molecular tests and increase the number of patients likely to respond to a matching targeted therapy. Moreover, we will be the only partner a pharmaceutical company can work with to develop a CDx for a new indication of a targeted therapy addressing these new patient populations. By contrast, most molecular diagnostic tests are undifferentiated and have little proprietary value, which gives pharmaceutical companies a wide range of companies to select from when choosing a molecular-based CDx partner.
- **Streamlined FDA approval of targeted therapeutics.** CELx tests will enable our pharmaceutical partners to enroll patients in their clinical trial with the same cellular dysfunction their targeted therapy is designed to inhibit. We believe this will improve patient response rates, increasing the likelihood the trial meets its endpoint target and thus the likelihood the drug receives FDA approval. Improved patient response rates would also help reduce the size, cost, and length of our partner's clinical trials.

OUR INDUSTRY

According to the Centers for Disease Control and Prevention, or CDC, cancer was the second-leading cause of death in the United States in 2015, responsible for nearly one of every four deaths. Based on data collected from 2010 to 2012, the ACS indicates that approximately 42% of males and 38% of females in the United States will develop cancer at some point in their lives. CDC data shows that annual deaths from cancer nearly tripled between 1950 and 2014, and a 2016 report from the World Health Organization, or WHO, attributes 8.8 million worldwide deaths in 2015 to cancer. As life expectancies grow and cancer diagnoses increase, significant resources have been devoted to the search for effective cancer treatments. The 2016 report from the WHO shows that the total annual economic cost of cancer was greater than \$1 trillion and growing.

There are many types of cancer treatment options, including surgery, radiation therapy, chemotherapy, immunotherapy, hormone therapy, stem cell transplant, and targeted therapy. Targeted therapies are drugs or other substances that block the growth and spread of cancer by interfering with specific molecular targets involved in the progression of cancer. Targeted therapies differ from standard chemotherapy drugs in that they are often cytostatic (block tumor cell proliferation) rather than cytotoxic (kill tumor cells). According to the National Cancer Institute, there are currently more than 80 approved targeted oncology therapies, some of which cost more than \$100,000 per treatment course, and an IMS Institute article published in 2016 reports that annual global growth in the oncology drug market is expected to be 7.5 to 10.5% through 2020, reaching \$150 billion, driven in part by the high costs associated with targeted therapies.

Diagnostic tests to detect single biomarkers are now widely used by pathologists to determine the molecular sub-type of a cancer. When a molecular biomarker test is used to support the choice of therapy to prescribe, it is often referred to as a “companion diagnostic.” Increasing numbers of targeted therapeutics are prescribed based on the results from a companion diagnostic test to detect the presence of a molecular biomarker. Only patients testing positive for the biomarker are eligible to receive the associated therapy.

Companion diagnostics are becoming increasingly important to the pharmaceutical industry. The use of companion diagnostics to better match patients to effective treatments positively impacts clinical outcomes and lowers expenditures on drugs that do not benefit patients. Stratifying the eligible patient population to include only likely responders is particularly important when the percentage of likely responders is only a fraction of the total cancer population. In these circumstances, narrowing the eligible patient population is often necessary to meet the clinical endpoint targets required to receive FDA drug approval. According to the October 2016 Global Companion Diagnostics Market report published by Market Data Forecast, the global companion diagnostics market totaled \$3.3 billion in 2016, making it one of the fastest-growing segments of the in vitro diagnostic market, and is projected to continue strong growth into the future based on the number of drugs in clinical trials. The report notes that the global companion diagnostics market is expected to grow to \$8.9 billion by 2021.

OUR MARKET OPPORTUNITIES

CDx Development Opportunities

We believe there at least 50 different potential opportunities for our company to collaborate on CDx programs with pharmaceutical companies. Our ability to develop partnering relationships with these pharmaceutical companies will be predicated on a number of factors, including the size of the patient population our CELx test identifies, the remaining patent life of the matching targeted therapy, as well as the success or failure of clinical trials we have conducted with other pharmaceutical companies. Completing clinical trials requires, among other things, successful enrollment of patients, meeting trial endpoint goals, and completing the trial in a timely manner. The time to complete a clinical trial can vary widely depending on a number of factors, many of which will be specific to any particular clinical trial.

We believe the total potential revenue opportunity for the various CDx development programs we will seek is approximately \$1.6 billion. This assumes there are 50 potential CDx programs, milestone payments during the program average \$20 million, and the number of patients we test to screen for enrollment in clinical trials averages 3,000. We estimate each program would generate \$12 million in revenue from tests for the clinical trials, assuming a \$4,000 price per test (the low end of our expected price range). The number of potential CDx programs is based on the number of new cancer sub-types we have discovered and the number of approved or investigational matching targeted therapies we have identified. The number of clinical trial tests we estimate each CDx program will require assumes our partner will enroll 300-450 CELx selected patients for their clinical trials. The estimated amount of milestone payments is consistent with several recently announced CDx programs. The table below summarizes the total potential available revenue from these CDx development programs.

CDx Program Total Revenue Potential

Number of Potential CDx Programs	50
Number of Clinical Trial Tests per CDx Program	3,000
Price per test	\$4,000
Total Potential Clinical Trial Revenues (A)	\$600,000,000
Milestone Payments per program	\$20,000,000
Total Potential Milestone Payments (B)	\$1,000,000,000
Total Potential Revenue—All Programs (A+B)	\$1,600,000,000
Average CDx Program Revenue	\$32,000,000

We believe the revenue opportunity per CDx program is consistent with other development programs pharmaceutical companies support. In addition, the revenue projection for an individual CDx program

represents only a small fraction of the potential value the new drug indication our CDx could create for our pharmaceutical company partner. For some drugs, our tests could double the number of patients eligible for a targeted therapy. Our CELx HSF Test identified 20% of HER2-negative patients with abnormal HER2 signaling who may benefit from treatment with HER2 drugs. Fully deployed, this test could increase the annual number of eligible patients to receive HER2 targeted therapies by 55,000 in the U.S. alone, which more than doubles the current number of patients eligible to receive them. This assumes that our CELx HSF Test identifies abnormal HER2 signaling in approximately 20% of the 278,000 HER2-negative breast cancer patients that, based on 2016 estimates from the NCI SEER Review and a May 2017 publication by the AACR, are currently receiving treatment each year.

CELx Testing Opportunities

We expect to generate recurring CDx testing revenues once a CELx CDx-linked drug therapy is approved for patient use. On average, we believe that the lifetime value of providing the CDx test will significantly exceed the revenue generated from the CDx development program. We expect to offer each CELx test to patients at prices ranging from \$4,000–\$7,000, depending on the number of pathways evaluated. No tests directly comparable to the CELx tests are available today to offer reference points for pricing purposes. Pricing for several proprietary complex genomic tests, however, fall within this range and we believe this provides guidance on the amount insurance companies are willing to pay for highly informative tests that guide patient care.

We estimate an approximately \$3.5 billion annual U.S. market opportunity for CELx CDx programs and physician ordered tests. For purposes of estimating the size of the market, as presented in the table below, we assume a CELx test price of \$4,000. The number of test eligible patients listed in the table below was derived from 2016 estimates in the NCI SEER Review and 2017 data available from the ACS.

Target Market Potential—U.S. Only

Disease Type	Test-Eligible Patients	Annual Revenue
Breast (HER2-)	278,230	\$1,112,918,400
NSCLC	263,612	\$1,054,446,000
Ovarian	29,051	\$ 116,204,800
Colon	146,000	\$ 580,983,800
Bladder	68,072	\$ 272,247,800
Kidney	57,084	\$ 225,280,800
Leukemia	40,294	\$ 161,175,200
	880,814	\$3,523,256,800

CELx TECHNOLOGY BACKGROUND

The Role of Cellular Signaling Pathways in Cancer

Cancer is a class of exceedingly complex and diverse diseases characterized by the development of abnormal cells that divide uncontrollably and can infiltrate and destroy normal body tissue and disrupt normal organ function. In normal cells, a series of biochemical activities, known as signal transduction, transmit biochemical signals through an interconnected network of signaling pathways to control cell proliferation and survival. Cancer arises when alterations occur in one or more of these signaling pathways and normal cell processes are disrupted, resulting in uncontrolled cell proliferation. These alterations are driven by a variety of cellular aberrations, including genetic mutations and dysfunctional signaling pathway mechanisms. Identifying the alteration driving an individual's cancer is complicated by the immense complexity of these signal transduction processes and the practically unquantifiable number of pathway variables.

As recently as 20 years ago, most cancers were classified and subsequently treated solely on the basis of the anatomical location of the tumor in the body. Chemotherapies that kill rapidly dividing cells were

widely used, but they had only limited efficacy for many patients and caused a wide range of dangerous side effects due to lack of discrimination for tumor tissue. As tools to identify molecular mutations became available, scientists began to uncover correlations between certain molecular mutations, cancer tissue type, and a patient's prognosis. This fostered the development of molecularly targeted therapeutics that were designed to disrupt the specific cellular function of the drug target, typically abnormal signaling pathway activity, associated the molecular mutation. These targeted therapies greatly improved outcomes for some cancer patients and are a testament to the efficacy of targeted therapies when effectively prescribed. According to information published by the Journal of Clinical Oncology in July 2015, targeted therapies are oftentimes 10 to 20 times more expensive than chemotherapies.

In conjunction with the advent of targeted therapies, new molecular diagnostics were developed to help physicians refine the classification of a patient's cancer into sub-types based on the presence of a specific molecular anomalies, such as genetic mutations or over-expressed proteins. Such mutations or over-expressed proteins are commonly referred to as "biomarkers" when they are used to diagnose a disease and evaluate treatment options. For instance, breast cancer diagnostic tests are performed to determine whether two protein biomarkers, human epidermal growth factor receptor 2 (HER2) or estrogen receptors (ER), are overexpressed in the cancer cells. The results of these tests are used to classify the patient's cancer molecular sub-type and to guide selection of a corresponding targeted drug therapy.

The launch and on-going development of many new targeted therapies and the increasing use of companion molecular diagnostics to guide selection of the most appropriate therapy for each patient ushered in the era of so-called "precision medicine" in oncology. Advances in genomic and proteomic techniques and drug discovery enabled researchers to identify new drug targets, new molecular diagnostics, and drugs that would specifically bind to the target.

While the increased usage of targeted therapies has improved patient outcomes, there is increasing recognition that the promise of molecularly guided diagnoses and targeted treatment has fallen far short of expectations. This is generally due to the heterogeneous nature of these diseases from patient to patient and the challenge of identifying the specific cellular dysfunction driving a cancer patient's tumor growth. No matter how sophisticated or detailed, a point-in-time molecular profile can only provide a snapshot of a tumor. As a result, the genetic mutations many current tests identify are often only weakly correlated to the abnormal signaling driving a patient's cancer. This is because protein and gene profiling provide an incomplete assessment of the biochemical activity promoting cancer tumor growth. In fact, when dysfunctional, the activity of signaling pathway networks are, we believe, not possible to assess using current genetic analyses, despite the impressive investments in mapping the human genome and advancements in techniques to identify molecular mutations.

The combination of the heterogeneous nature of cancer and the weak correlation of abnormal signaling to many genetic mutations helps explain why the response rates for patients treated with many targeted therapies are often less than 50%, and in some cases as low as 10% to 20%. The table below provides representative examples of response rates to targeted therapies that rely on a CDx to select eligible patients, as well as an example of the objective response rate for a targeted therapy that does not use a CDx to select eligible patients. The objective response rates listed below were obtained from the clinical trial data included with each of the targeted therapies' respective FDA labels.

Targeted Therapy Objective Response Rates

Targeted Therapy	Type of Cancer	Biomarker	Objective Response Rate ⁽¹⁾
<i>Herceptin</i> [®] (04/17)	Breast	HER2	16%
<i>Perjeta</i> [®] (03/16)	Breast	HER2	11%
<i>Gilotrif</i> [®] (07/13)	Lung	EGFR mutations	31%
<i>Votrient</i> [®] (05/17)	Kidney	None	27%
<i>Erbbitux</i> [®] (10/16)	Colon	EGFR/K-Ras WT	18%

- (1) Objective response rate (ORR) is the difference between the ORR of the targeted therapy and the ORR of the control drug during the targeted therapy's pivotal clinical trial, as reported in the targeted therapy's FDA drug label.

For a patient to respond to a targeted therapy designed to disrupt disease-related signaling activity, two factors must be present: (1) the patient's diseased cells must have the same signaling pathway dysfunction the drug is designed to inhibit, and (2) the drug affects its targeted pathway as intended. Current state-of-the-art genomic tests use fixed (dead) cells, which limits them to evaluating the presence or concentration of a genetic mutation or protein. These tests cannot evaluate either dynamic signaling activity or whether a drug can affect that activity. When a patient's genomic biomarker status does not represent underlying signaling pathway dysfunction, this can lead to selection of the wrong targeted therapy to treat the patient. Of particular interest to us are those patients with dysfunctional signaling who lack a corresponding biomarker; they are not currently eligible to receive any targeted therapy that treats their dysfunctional signaling.

To measure dynamic cellular activity, living patient tumor cells are required. Until our advancements, efforts to use living patient tumor cells have been limited by the lack of reliable methods to extract and culture cancer cells from patient tumors. These previously limited efforts reflect the emphasis amongst cancer researchers on creating stable cell lines for use to model cell function or to studies screen millions of test compounds in drug discovery programs. Pharmaceutical companies driving the commercial development of cell technologies work primarily with immortalized cells or cell lines genetically modified to express a target or mutation of interest. These cell lines consist of established cell cultures that proliferate indefinitely and very uniformly. They are used primarily because they provide a highly uniform response when tested with millions of small molecules in the search for potential new drugs, and because techniques to culture these cells are well known, their properties well understood, and other experimental results using them are available for comparison purposes. Conversely, live patient tumor cells are difficult to obtain, are only available in small quantities, and according to a 2014 article published by *Science*, the percentage of tumors that yield proliferative cells with conventional culturing methods has until now been well below 50%, which required months of culturing to obtain sufficient testable quantities of cells. For these reasons, researchers prefer paraffin-fixed tissue or cell lines over living tumor cells when studying disease processes or screening drug candidates. This lack of compelling rationale for pharmaceutical companies and academic institutions to work with live tumor cells for research purposes left the field of live tumor cell research in a relatively immature state.

Our CELx Platform

We have made significant investments in research and development to build the first commercially-ready cancer diagnostic platform that we are aware of that measures the signaling pathway activity in a patient's living tumor cells. To measure dynamic cellular activity, we internally developed two distinct but complementary technologies, which now comprise our CELx platform:

- our proprietary cell microenvironment; and
- our method to quantify dynamic patient cell signaling dysfunction.

We utilize our CELx platform to create CELx tests that measure specific signaling pathway activity in various tumor types.

Cell microenvironment. Previous research has shown that cancer cells extracted from a patient's tumor share the molecular features of the primary cancers from which they were derived and could provide an *ex vivo* (outside the patient) model of a patient's tumor. The technology around tumor cell extraction from individual patients and culturing techniques, however, has largely remained undeveloped. For instance, no competing diagnostic tests use live patient tumor cells to measure dynamic cell signaling activity and studies on the topic have historically highlighted the challenges of deriving a viable patient tumor cell sample from an individual patient tumor specimen.

We have developed a cell microenvironment to extract and expand viable tumor cells from fresh human tumor tissue, which meets the three critical clinical parameters a patient-derived tumor cell sample would need to satisfy in order to meet the regulatory and clinical requirements for a diagnostic test measuring signaling activity:

- **The patient cell sample tested must reflect the starting tumor's composition.** If samples do not reflect the original tumor's composition, test results derived from that sample may not be

representative of the patient's tumor. Competing techniques largely rely upon use of irradiated non-tumor cells to foster cell proliferation, transformative "engineering" techniques or other un-natural manipulations of the cells to keep them alive. Because these competing approaches significantly increase the risk that the resulting patient cell test sample may not mirror the patient's original tumor, we developed processes that only utilize tumor cells derived directly from the patient's tumor specimen.

- **The sample must be available for testing in less than 21 days.** Clinicians generally require test results in cases of complex diseases such as cancer within two to three weeks so they can begin treatment of their patient as soon as the initial symptoms are evaluated or a preliminary diagnosis is made. Competing techniques require two to six months to culture sufficient tumor cells for a test sample, making them unsuitable for use with a clinical diagnostic. To meet this time requirement we developed processes that allow tumor cell proliferation outside the patient.
- **At least 90% of the tumor specimens obtained from a patient must yield testable samples.** Clinicians will only order tests that require a patient specimen when they are highly likely to receive a test result. The challenges of increasing the cell sample yield from tumor tissue are well known and competing techniques are only able to obtain testable quantities of cells from less than 50% of patient tumor specimens. To meet this requirement, we developed processes that enhance cell survival when tumor cells are removed from live tissue.

We believe our pioneering efforts have substantially advanced the technology of primary tumor cell culture technology. We have one issued U.S. patent, four pending U.S. patent applications, nine pending non-U.S. patent applications and one pending international PCT patent application, as well as significant proprietary know-how and trade secrets for the various cell sample preparation methods we have developed.

The table below compares the critical advantages of our approach to the requirements for a clinical test with the prior state-of-the-art.

Critical Advantage of CELx Platform

Parameter	Clinical Test Requirements	Prior State-of-Art	Celcuity	Celcuity's Advancement
Sample Composition	Cell population tested must reflect starting tumor composition	Multi-passagen culture process requires use of irradiated non-tumor cells	Only patient tumor cells are used to derive the sample	Cells tested mirror heterogeneity of patient tumor tissue
Culturing Period	<21 Days	2–6 months ⁽¹⁾	<14 days	Results available in clinically relevant window
Yield	>90%	<50% ⁽¹⁾	95%	Reliability exceeds clinical test requirements

- (1) Crystal, A.S, et. al., Patient-derived models of acquired resistance can identify effective drug combinations for cancer, *Science*, 13 November 2014.

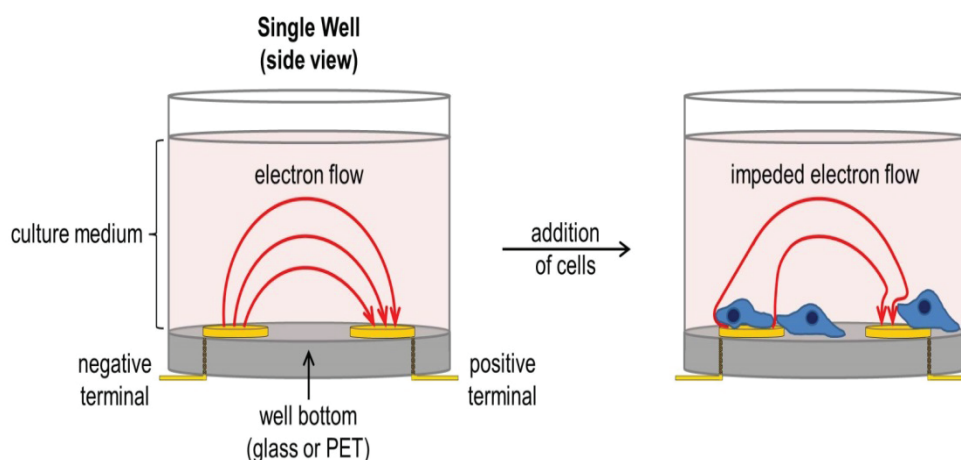
Dynamic patient cell signaling quantification. The second component of our CELx platform involves methods to quantify specific dynamic signal transduction events in patient derived tumor cells. The complexity of signal transduction processes is immense and the permutations of the pathway variables are practically unquantifiable. Current analytical methods to assess these variables use dead (fixed or lysed) cells. Point-in-time measurements are limited to assessment of the compositional status (e.g. mutation), concentration level (e.g. protein amount), or activation status (e.g. phosphorylation) of a finite number of signaling pathway components. A key insight underlying our technology was our observation that, no matter how sophisticated or detailed, a point-in-time molecular profile would only provide a snapshot. These methods could not provide a complete, dynamic assessment of the signaling activity driving a patient's cancer. These point-in-time molecular analyses would, in many cases, only provide a weak

correlation to the presence of the signaling pathway dysfunction driving a patient's cancer. Instead, we concluded that a complete diagnosis of cancer and an assessment of a patient's response to treating their disease requires measurement of the underlying activity of signaling pathways in live patient tumor cells.

To measure live real-time dynamic cell signaling activity, we utilize an impedance biosensor instrument. An impedance biosensor is an analytical platform that converts changes in cellular activity to a measurable electrical signal. We use the instrument to monitor dynamic changes in cell adhesion and morphology initiated by signal pathway activation or inhibition in live patient tumor cells. The instrument is comprised of a 96-well microplate with thin gold electrodes covering the bottom of each well. Wells employed with a selective extracellular matrix attach viable cells in a specific manner to the electrodes. The presence of viable cells on top of the electrodes affects the local ionic environment at the electrode/cell interface, leading to an increase in electrode impedance. To obtain a measurement, a small alternating current is applied across the electrode. When cells are added to the microplate wells and attach to the electrodes, they act as insulators increasing the impedance in each well.

As cells cover the electrodes, the current is impeded in a manner related to the number of cells and their adhesion properties. In addition, since cell signaling changes modulate a cell's adhesion properties, the impedance biosensor detects and quantifies these changes. When cells are stimulated and change their function, the accompanying changes in cell adhesion thus alter the impedance that is measured.

The following schematic provides an example of impedance measurement in a single-well of the microplate:



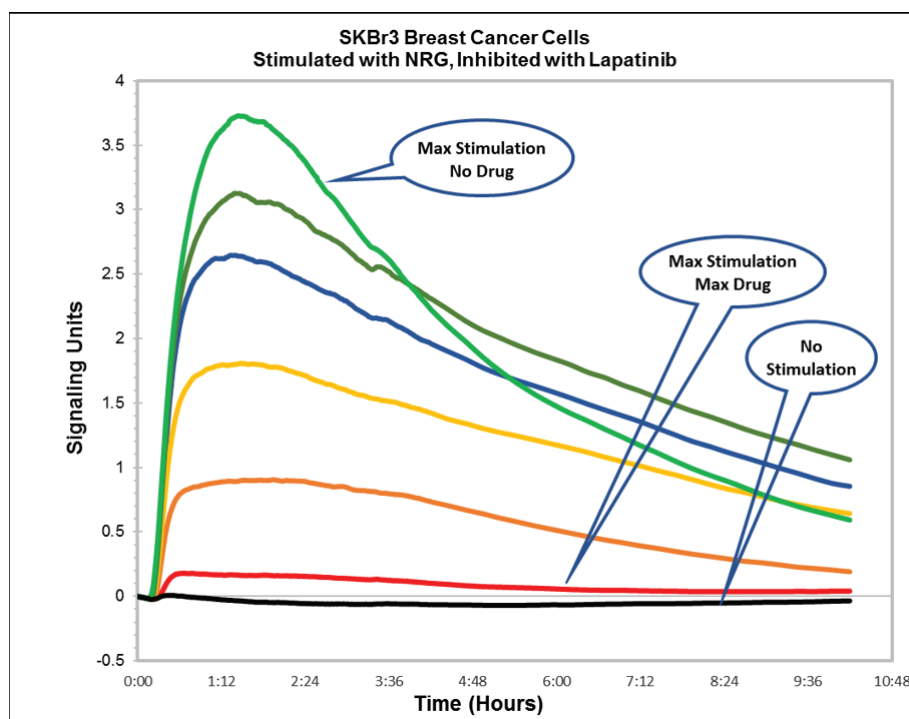
To determine the activity of a specific signaling pathway, an activating agent specific to a pathway receptor is used to turn on the pathway and a corresponding inhibitory agent specific to the pathway receptor is used to turn signaling off. When signaling pathways are stimulated in this manner, adhesion molecules are effected and cause a change in the impedance measured in a well. By relying on the principle of detecting signaling pathway activity, we believe we can develop tests for a range of disease types and targeted therapies that affect various cellular pathways.

Data is recorded in real-time when a patient's tumor cells are responding to activating or inhibitory agents and analyzed with the impedance biosensor. The output value is reported as the change in the electrical impedance measured. The change in impedance values is quantified over time and used to determine a Signaling Function Score. An example of the data output recorded during a CELx test using an impedance biosensor instrument is provided below.

In this example, a HER family signaling pathway (HER3) in a sample of breast cancer cells is stimulated with an activating agent (NRG1b) alone and in combination with various concentrations of a dual-HER family pathway inhibitor (lapatinib). The uppermost curve labeled "No Drug — Max Stimulation" represents the amount of HER3 signaling pathway activity that occurs over a 10-hour period when the breast cancer cells are stimulated with the NRG1b alone. The remaining curves represent the amount of pathway activity that occurs after the pathway inhibitor is added to cells at different doses. The

curves with the pathway inhibitor added have decreasing peak and decreasing aggregate values and demonstrate that the test has an expected dose dependent response to the addition of the pathway inhibitor. The curve labeled “Max Stimulation—Max Drug” indicates that, in this example, nearly all the pathway activity stimulated with the activating agent is inhibited or blocked by the pathway inhibitor.

Typical Impedance vs. Time Data Set⁽¹⁾



(1) Data output recorded during a CELx test conducted by Celcuity.

NEW PRODUCT DEVELOPMENT

We are leveraging our CELx technology to discover new cancer sub-types that a genomic test cannot detect. These new sub-types are characterized by the hyperactive signaling pathway our test identifies. These sub-types cannot be detected by genomic tests because they lack a corresponding molecular biomarker to identify it. We will translate our discoveries into diagnostic tests that incorporate the following primary steps:

- (1) **Extraction of proliferative tumor cells from patient biopsy.** This step provides the patient tumor cells that we use to perform the test.
- (2) **Activation of signaling pathway activity.** This step determines whether the signaling pathway we are assessing is dysfunctional or not.
- (3) **Inhibition of signaling pathway activity.** This step determines whether the matching targeted therapy is functional in the patient’s tumor cells. If the drug can block a significant amount of the signaling dysfunction, this demonstrates lack of an inherent resistance mechanism in the patient’s tumor cells that would prevent the drug from functioning when prescribed to the patient.

We confirmed that we can discover new cancer sub-types in 2015 with the discovery of two new breast cancer sub-types—HER2-/ER+ and HER2-/ER- breast cancer with abnormal HER2 signaling. We are now leveraging the expertise we gained while validating the resulting CELx HSF Test for breast cancer to guide our discovery of additional cancer sub-types.

We are currently conducting research to identify additional cancer sub-types in five solid tumor types that, according to 2016 estimates from the NCI SEER Review and 2017 data from the ACS, account for nearly 560,000 new diagnoses annually. Our research studies to date have identified 14 potentially new

breast, lung, ovarian, kidney, and bladder cancer sub-types that involve dysfunctional oncogenic signaling pathways. Multiple dysfunctional pathways were active in each of these tumor types. These studies confirm that the CELx platform can be a cancer sub-type discovery engine and that we can create a multi-pathway test to identify the specific driver in a patient's tumor. We expect to eventually expand the tumor types we evaluate to include colon, head and neck, leukemia, esophageal, and gastric cancers that account for nearly 279,000 new diagnoses annually according to 2016 estimates from the NCI SEER Review.

We have now begun development of CELx tests for a number of these new potential cancer sub-types. Our goal is to characterize the prevalence of these new sub-types and to confirm that they can be inhibited with a matching therapy in mouse xenografts in 2017.

Pathway	Cancer Site
HER2	<u>Current R&D</u>
Pathway 1	Breast
Pathway 2	Lung
Pathway 3	Bladder
Pathway 4	Kidney
Pathway 5	Ovarian
Pathway 6	<u>Future R&D</u>
Pathway 7	Colorectal
Pathway 8	Bone Marrow
	Head and Neck
	Esophageal
	Gastric

We will seek to identify individual signaling pathways that may be driving at least 5% to 10% of the total cancers in each tissue area. Once we have characterized the prevalence of the different sub-types of signaling dysfunction in each tumor type and validated the tests for the different pathways, our plan will be to launch a corresponding CELx test. Eventually, each CELx test will analyze multiple pathways in a patient's tumor to identify the specific pathway dysfunction driving a patient's cancer. Testing multiple pathways will thus provide a systems view of the patient's cancer using dynamic functional analysis. We believe this will result in more accurate diagnosis of a patient compared to molecular diagnostics that are using next generation sequencing to assess the status of multiple static biomarkers.

Clinical Trial Approach

A major component of our development and commercial activities is providing clinical data from interventional clinical trials using our CELx tests. Our clinical trial strategy is predicated on proving the correlation between our CELx Signaling Function Score and a patient's clinical results. Once our first trial demonstrates that our CELx HER2 Test identifies patients responsive to HER2 targeted therapies, we expect pharmaceutical companies to partner with us to fund trials to evaluate new potential indications for their drugs with patients identified by one of our CELx tests. The trials will be designed to confirm that patients with abnormal pathway signaling obtain a superior clinical response to a therapy targeting that pathway than to the standard-of-care therapy they currently receive.

Each clinical trial would be structured as a prospective interventional study. The objective would be to confirm the relationship between the CELx Signaling Function Score generated by the CELx test and the study endpoint. Different primary endpoints will be used depending on the stage and type of cancer. For late-stage solid tumor trials, Time-to-Progression, or TTP, or Progression-Free Survival, or PFS, would likely be used, mirroring the endpoints used in the tested drug's pivotal trial. For early stage solid tumor trials, pathological complete response, or pCR, would likely be used. The trials will either be single-arm or randomized two-arm.

We also expect to evaluate multiple CELx tests in the same trial when we have identified two or more cancer sub-types in the same tumor type (e.g., breast, ovarian, lung). Screened subjects would be assigned to a therapy arm that corresponds to the pathway found to be abnormal.

To obtain statistically significant results, a randomized two-arm trial is projected to require enrollment of approximately 120 to 150 patients for each drug evaluated, or between 60 to 75 patients in each arm. A single-arm trial would require 25 to 50 patients. We estimate each trial will require 18 to 27 months from the initiation of enrollment to completion of the follow-up period and that interim analysis will be performed in most trials with interim data available after 10 to 15 months.

For trials involving patients not currently eligible for a cancer drug that targets a certain pathway, we would first obtain a tissue specimen from each subject and perform the CELx test to identify subjects who have abnormal signaling. These patients would then be randomly assigned to either an arm that receives the current standard-of-care therapy or one that includes the current standard-of-care therapy plus the targeted therapy. All patients would be monitored until their disease progresses.

First Test—CELx HER2 Signaling Function Test

HER2+ breast cancer. Roughly 15% to 20% of breast cancer patients are diagnosed with HER2+ breast cancer when their tumor cells are found to have overexpressed or amplified levels of HER2. These patients are treated with anti-HER2 targeted therapies in combination with chemotherapies. Results from a number of clinical trial results for HER2 drugs reveal that only about 40% of HER2-positive patients respond to them. In addition, findings from several clinical trials have shown that a sub-set of HER2-negative patients benefit from therapies that target HER2. These results highlight the relatively weak correlation between HER2 receptor or gene amplification status and drug response.

Signaling activity status vs. HER2 receptor status. Based on this analysis, we concluded that measurement of HER2 signaling activity, rather than absolute HER2 levels, may more accurately diagnose HER2-driven breast cancer. This led to our successful studies in 2014 when we discovered abnormal HER2 signaling in HER2-negative breast cancer patient tissue. We concluded that this patient population provided an excellent opportunity to validate our hypothesis that signaling activity is more correlative to disease activity than receptor status.

HER2-negative breast cancer. Based on 2016 estimates from the NCI SEER Review and a May 2017 publication by the AACR, we estimate that approximately 396,000 women receive treatment for breast cancer in the United States each year. This includes 246,000 newly diagnosed patients and 150,000 women whose cancer has recurred. Approximately 84% of these women, 278,000, have HER2-negative breast cancer; these women represent the target patient population for this test.

HER2-Negative Breast Cancer Population

BC Type	Diagnosis				CELx HER2 Test Target Population	
	Primary %	Primary #	Recurrent %	Recurrent #	%	#
HER2-, ER+	67%	165,312	67%	100,800	80%	212,890
HER2-, ER-	17%	40,590	17%	24,750	100%	65,340
	84%	205,902	84%	125,550	84%	278,230

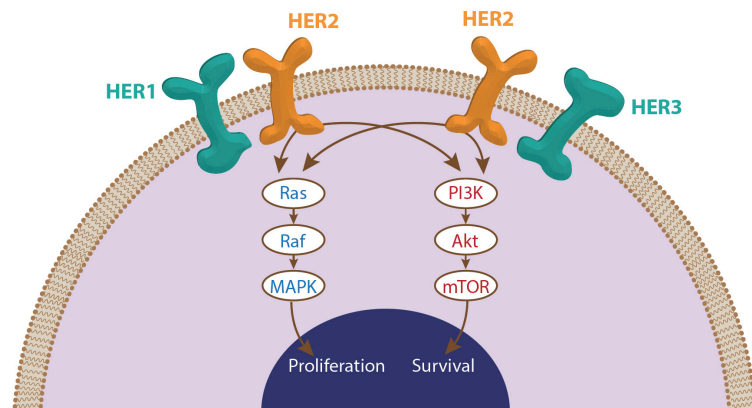
Measuring HER2-status not sufficient to diagnose all HER2 cancers. Despite the widely recognized role that a dysfunctional HER2-related signaling network plays in promoting breast cancer, only tests measuring a single reactant, HER2 protein, are performed in the clinic to diagnose it; we believe no diagnostic tests are available today that measure HER2 signaling activity within a patient's breast tumor epithelial cells. This focus on measuring HER2 expression-levels reflects the widely-held view that measuring a patient's HER2 status is sufficient to diagnose HER2-driven breast cancers. When only HER2 expression is measured, though, patients classified as HER2-negative but whose tumor cells have abnormal HER2 signaling are diagnosed as not having HER2-driven breast cancer, when, in fact, they do.

Diagnosing HER2 disease in HER2-negative patients with CELx HER2 Signaling Function Test. Since current genomic methods cannot identify the HER2-negative breast cancer patients who have the HER2-driven cancer, a new method was required. Such a method would need to analyze the

HER2-signaling pathways (MAPK and PI3K) associated with HER2 cancers in a patient's tumor cells. This is what our CELx HER2 Test is designed to do. Our test identifies patients whose HER2 status as determined by conventional techniques does not represent the correct diagnosis of their breast cancer at a functional level.

The CELx HSF Test incorporates the following steps:

1. Measures signaling driven by HER2 hetero-dimerization of HER1 and HER3:
 - a. Activates PI3K & MAPK with HER3 ligand (NRG1) and HER1 ligand (EGF); and
 - b. Confirms signaling is HER2-driven using HER2 dimer blocker;
2. Quantifies amount of HER2 signaling anti-HER2 drugs inhibit; and
3. Reports HER2 signaling as either Normal or Abnormal in 14 days.



Improving outcomes, HER2 drug response rates, and lower cost per responding patient. Identifying these HER2-negative/HER2-signaling abnormal patients, and treating them with HER2 therapies, offers the potential to improve their clinical outcomes significantly. It is also likely that patients with abnormal HER2 signaling will respond at higher rates than HER2-positive patients. We believe that patients with abnormal HER signaling (e.g., those the CELx HSF Test diagnoses) are very likely to respond because they have the specific disease mechanism the HER2 therapies are designed to treat. This would result in a reduction in the cost of HER2 drugs per responsive patient for those the CELx HSF Test identifies compared to those identified with HER2 protein or gene status tests.

CLINICAL STUDIES

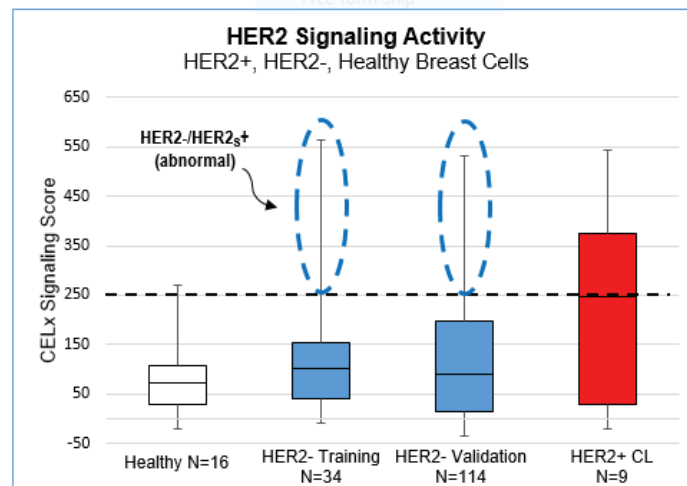
Prevalence Studies: 20% of HER2-Negative Patients Have Abnormal HER2-Signaling

To derive an initial estimate of the prevalence of abnormal HER2 signaling within the HER2-negative breast cancer population, we conducted a cell line survey, a training set study and a validation study using primary tumor cells. Live cell response to specific HER2 agonists (NRG1b and EGF) and antagonist (pertuzumab) was measured.

Key findings include:

- Cell Line Survey Study (N=19)
 - 4 of 9 HER2+ cell lines had HER2 signaling activity above 250 signaling units—these results helped establish an initial cut-off value;
 - Confirmed that normal HER2 signaling can occur in cells with overexpressed amounts of HER2; and
 - Confirmed that abnormal HER2 signaling can occur in cells with normal HER2 receptor levels.
- Training Set Study (N=50).
 - 7 of 34 HER2-negative breast cancer patients (20.5%; 95% CI = 10%–37%) had tumor cells with HER2 signaling activity that was characterized as abnormally high and consistent with the HER2 signaling found in the upper 50% of the HER2+ cell lines; and

- The 16 healthy breast specimens had a significantly lower average and standard deviation HER2 Signaling Scores than the HER2- and HER2+ breast cancer specimens.
- Validation Study (N=114)
 - 27 of 114 patients (23.7%; 95% CI = 17%–32%) had tumor cells with HER2 signaling activity that was characterized as abnormally high and consistent with the HER2 signaling found in the upper 50% of the HER2+ cell lines.
- The graph below presents the data from the Cell Line, Training Set and Validation Prevalence Studies in a Box-Whiskers plot format.
 - The dotted line at 250 represents the cut-off value for the CELx HSF Test. The cut-off value of 250 is equivalent to the median CELx Signaling Score recorded from the sample of HER2+ cell lines.
 - HER2-negative breast cancer patients with CELx Signaling Scores at or above 250 have abnormal HER2 signaling.
 - The circled portions of the plots for the HER2- Training Set and HER2 Validation Set results represent the specimens with Abnormal HER2-driven signaling.



Xenograft Study: Abnormal HER2 Signaling Correlates to Drug Response Better than HER2 Status

We conducted a study in collaboration with the University of Minnesota using xenograft mouse models of human breast tumors to evaluate the relationship of HER2-driven signaling and response to lapatinib, a reversible dual-HER2 kinase inhibitor. Key findings:

- The HER2 signal inhibitor shrank a HER2-negative tumor with abnormal HER2 signaling;
- The HER2 signal inhibitor did not affect the HER2+ tumor with normal HER2 signaling; and
- Findings contradict HER2 receptor-based conclusions:
 - Lapatinib inhibition more correlative to HER2 signaling than HER2 receptor expression; and
 - HER2 signaling status independent of HER2 receptor expression.

These findings support the hypothesis that HER2-negative breast cancer patients with abnormal HER2-driven signaling may benefit from treatment with anti-HER2 drugs.

A summary of results:

Xenograft Study Results

Parameter	Cell Line	
	HCC1954	BT483
HER2 Receptor Expression (IHC)	HER2+ (3+)	HER2- (0)
HER2 Signaling Status (CELx)	Normal	Abnormal
Lapatinib Inhibition (Xenograft)	13% (p = 0.34)	49% (p = 0.01)

Study of Two HER2 Antibody Therapies, Trastuzumab and Pertuzumab, in HER2- and HER2+ Cells

We conducted this study to compare the effectiveness of two anti-HER2 antibodies in blocking HER2-driven signaling in HER2+ and HER2- cells. Tumor cells from 5 HER2- primary tumors and 4 HER2+ cell lines were obtained. Real-time live cell response to NRG1, a specific HER2/HER3 agonist, with or without pertuzumab, trastuzumab, or the combination of the two, was measured and quantified. All cell samples tested had comparable, and abnormal, levels of NRG1 activated HER2-driven signaling. Key findings:

- In each sample, the two mAb's inhibited a higher percentage of signaling in combination than either mAb alone; no interference effects between the two mAb's were detected;
- Pertuzumab and trastuzumab alone were each more effective in the HER2- cell samples than in the HER2+ ones; and
- Two HER2 mAb's used to treat HER2+ breast cancer patients are as effective in blocking abnormal HER2-driven function *ex vivo* in HER2- primary cells as they are in HER2+ cell lines.

Average % NRG1 Inhibition

HER2 mAb	HER2+ Cell Lines	HER2-(HER2 _S +) Primaries
Pertuzumab	62%	73%
Trastuzumab	19%	44%
T + P	87%	81%

Study of Four HER2 Signal Inhibitors in HER2- and HER2+ Cells with Abnormal HER2 Signaling

Tumor cells from seven HER2-negative tumor specimens with abnormal HER2-driven signaling (HER2_S+) and the nine HER2-positive cell lines were obtained. Real time live cell response to NRG1, a specific HER2/HER3 agonist, with or without a HER2 targeted drug (pertuzumab, lapatinib, neratinib, afatinib) was measured and quantified. From these responses, the percentage inhibition of the HER2-driven signaling initiated by NRG1 by the HER2 drugs was determined. Key findings:

- Each of the HER2 drugs inhibited an average of at least 69% of the HER2-driven signaling activated by NRG1 stimulation in the HER2-negative primary cell samples;
- The highest level of inhibition was found with the two irreversible covalent dual RTKi's, afatinib and neratinib; and
- All of the HER2 drugs inhibited a greater percentage of HER2-driven signaling in the HER2-negative primary tumor cells than in the HER2-positive cell lines.

Average % NRG1 Inhibition

HER2 Drugs	Mechanism of Action	Cell Lines (HER2+)	Primaries (HER2-/HER2 _S +)
Pertuzumab	HER2 dimerization inhibitor	46%	78%
Lapatinib	Reversible Dual RTKi	15%	69%
Afatinib	Irreversible Covalent Dual RTKi	47%	93%
Neratinib	Irreversible Covalent Dual RTKi	95%	100%

Analytical Validation Study

We conducted analytical validation studies in accordance with applicable FDA guidance and Clinical and Laboratory Standards Institute, or CLSI, standards to characterize the performance of the CELx HSF Test. CLSI standards define the test protocols that the FDA and CLIA require laboratories to use to characterize the performance of their diagnostic tests. The study results confirm that the CELx HSF Test has high analytical sensitivity and specificity. A summary of the results is provided below:

CELx HSF Test Analytical Study Results

Performance Characteristics	Results
Analytical Precision (Qualitative)	
Analytical Sensitivity (95% CI)	95.8%–100% (88/88)
Analytical Specificity (95% CI)	95.8%–100% (88/88)
Detection Limits	
Limit of Blank	0.0020 cell attachment units
Limit of Detection	0.0099 cell attachment units
Cut-Off Characterization	250 signaling units
Carry Over	0%

Clinical Trial (in process): CELx test FDA Approved for Use in Clinical Trials

On May 8, 2017, we entered into a non-exclusive Clinical Trial Agreement with NSABP to conduct a 55-patient single-arm interventional trial, which will commence in the second half of 2017. Pursuant to the agreement, NSABP serves as the Sponsor and Principal Investigator of the trial and is responsible for, among other things, setting up clinical sites, enrolling patients, and managing clinical data. NSABP has contracted separately with Genentech to provide drugs for the study at no cost. We are performing the CELx HSF Test to select patients for the trial and are providing the funding for the trial's patient-related costs. Completing this trial will require, among other things, successful enrollment of patients, meeting trial endpoint goals, and completing the trial in a timely manner. Based on our estimates of patient enrollment rates, we expect to obtain interim results in 10 to 12 months after the first patient is enrolled in late 2017 and final results within 18 to 21 months.

NSABP is one of the country's premier clinical research cooperatives. Its members include many of the country's leading medical centers and their investigators are amongst the most-respected in the breast cancer field. Genentech is one of the largest biopharmaceutical companies in the world and was the first company to launch a HER2 targeted therapy; their anti-HER2 targeted therapies have roughly 95% market share.

We submitted an Investigational Device Exemption, or IDE, application to the FDA to obtain approval to use our CELx HSF Test in a clinical trial setting. The IDE submission included validation test protocols and study reports, manufacturing process summaries, and relevant publications. The FDA approved our IDE in early 2017.

The goal is to demonstrate that patients who have an abnormal signaling pathway, as identified by our CELx test, respond to treatment with a matching targeted therapy. A synopsis of the trial protocol is provided below.

Clinical Trial Synopsis

Objective	To evaluate the efficacy of neoadjuvant HER2 drug treatment in early stage HER2-/HER2 _s + breast cancer patients
Sites/Sponsor	Multi-center in collaboration with NSABP and Genentech
Subjects	55 HER2- early stage breast cancer (26 ER+/29ER-)
End Point	Pathological complete response (ypT0/Tis ypN0)
Investigational (Single) Arm	N=55 (HER2 _s +) AC-T + Trastuzumab + Pertuzumab

The results of our pre-clinical studies confirm that the CELx HSF Test can identify HER2-negative breast cancer patients whose tumor tissue has abnormal HER2-signaling activity. The proportion of the total HER2-negative breast cancer population that has abnormal HER2-signaling, an estimated 20%, is significant. There would be roughly 55,000 U.S. patients who would become eligible to receive HER2 therapies as a result of our test. For drug companies, we estimate our test could drive \$4 billion of new annual revenue for HER2 therapies, creating significant motivation to partner with us to promote it. This assumes the 55,000 HER2-negative breast cancer patients diagnosed with abnormal HER2 signaling by our CELx HSF test are treated with HER2 therapies costing approximately \$73,000 per patient. The per patient therapy cost assumed is in line with the cost of Herceptin[®] and Perjeta[®], the current standard of care HER2 drug treatment regimen that, according to Genentech at the time of launching Perjeta[®] in 2012, had a wholesale price of \$10,900 per month.

Pursuant to our agreement with NSABP, the cost of the study is \$2.65 million, subject to adjustment based on reimbursement for travel and similar expenses. Of this amount, we paid \$300,000 upon entry into the agreement and we will pay: (i) an aggregate of approximately \$1.8 million as certain patient milestones are met, (ii) six quarterly payments of \$50,000 commencing in 2017 and ending in 2019, and (iii) a final payment of \$250,000 upon completion of the study.

Our agreement with NSABP may be terminated by one or either party upon certain events, such as: (i) the FDA withdrawing its authorization and approval to perform the study, (ii) NSABP determining that the human and/or toxicology test results support termination of the study, (iii) either us or NSABP determining that an adverse reaction or side-effect of drugs administered in the study or a modification of the study's protocol raises safety issues to support termination of the study, (iv) either party remaining in material breach of the agreement for a period of 30 days following notice of such breach, (v) us not performing the CELx HSF Tests or providing study kits, (vi) us failing to pay amounts owed to NSABP, and/or (vii) Genentech terminating its agreement with NSABP to supply drugs for the study or the drugs for the study no longer being manufactured or being available.

COMMERCIALIZATION STRATEGY

Our commercial activities will target three complementary groups at various phases of the development of our CELx tests.

- **Pharmaceutical companies.** For each CELx test we develop to diagnose a new cancer sub-type, we will identify the matching targeted therapies, either currently approved or in the investigational phase, and the manufacturer of those therapies. We will initiate discussions and seek to reach development agreements with each of these pharmaceutical companies when we have verified the prevalence of the cancer sub-type and completed successful animal studies.
- **Medical and surgical oncologists.** We will initially target key opinion leaders, or KOLs, in each cancer type once we have completed the analytical validation of a CELx test. This will allow us to build awareness and credibility for the CELx test as we are generating clinical validation data. When a new drug indication is received that requires use of a CELx CDx to identify eligible patients, we will coordinate the pharmaceutical company's go-to-market activities with our own. This coordination will allow us to significantly leverage the pharmaceutical company's sales, marketing, and reimbursement, unlike traditional molecular diagnostic companies.

- **Payors.** We will initiate pilot activities with payors for late stage patients during the clinical validation phase of a CELx test's development. We will expand our payor efforts to include health economics analysis once we have clinical trial data available. When a new drug indication is received that requires use of a CELx CDx to identify eligible patients, we expect to coordinate the pharmaceutical company's reimbursement activities with our own.

Our CELx tests are laboratory developed tests and subject to regulation under the Clinical Laboratory Improvements Act (CLIA). We completed the analytical validation of our first CELx test and received CLIA certification in 2016, at which time our CELx HSF Test was ready to sell commercially on a stand-alone basis to treating physicians. We expect to generate revenues from CELx tests performed in conjunction with the clinical trials a pharmaceutical company will field during the clinical phase of our partners' drug approval process. We also expect that the agreements we enter into with the pharmaceutical companies partnering with us on these trials will include milestone payments at initiation and completion of trials and perhaps at various other negotiated points during the trials. We expect to generate revenue from the sale of CELx tests ordered by physicians either as stand-alone diagnostics or, upon the approval of our pharmaceutical company's matching drug, as a CDx. A key requirement for success of these partnerships will be clinical trial results that demonstrate the advantages of using a CELx test as a companion diagnostic.

We intend to position our unique and highly differentiated tests as practice changing advancements in patient care. To inform key stakeholders of the value of our solution in order to drive adoption and reimbursement, we expect to employ the following diverse commercialization strategies over time:

- leverage our pharmaceutical partnership and their go-to-market initiatives for the drug our CDx is partnered with;
- collaborate with oncology thought and KOLs and leading institutions on clinical research, publications, and product development;
- build an experienced, oncology-focused sales force in the United States and international distribution channels that are supported by dedicated company personnel;
- integrate into the everyday practice of clinicians through our medical affairs and client services efforts;
- publish important medical and scientific data in peer-reviewed journals and present at major industry conferences, conduct clinical trials; and
- work with patient advocacy groups, leading cancer philanthropic organizations, and medical societies to drive awareness of CELx tests and the importance of incorporating functional cellular analysis into cancer treatment.

Through these efforts, we will seek to promote our CELx test's unique capabilities throughout the oncology community—from patients, to the physicians treating them, to the third-party payors for these treatments and to biopharmaceutical companies developing new treatments—all with the goal of facilitating better-informed treatment decisions for the greatest number of patients.

Once results from our current clinical trial are available, we expect to launch our first test, the CELx HSF Test in two phases. During the first phase, we intend to target KOLs in the oncology field to build awareness of our CELx platform. These KOLs are primarily comprised of oncologists and surgeons practicing at major academic health systems who participate in clinical research and cancer research scientists. They often are early adopters of new technologies, particularly those involving new insights into disease mechanisms.

We expect to gradually ramp up our efforts to the remainder of the medical oncologists once we have established our reputation within the KOL community. In addition, we will increase our investment in a direct sales force once our first clinical trial for our CELx HSF Test is completed, which we believe will occur in late 2018.

Once a CELx test is launched to the broader market, we expect physicians, typically a medical or surgical oncologist, will order our tests either as stand-alone diagnostics or, upon the approval of a pharmaceutical company's matching drug, as a CDx. The physician will prescribe a CELx test and coordinate provision of a patient specimen from a biopsy or surgical procedure. The fresh tissue would then be shipped overnight directly to our laboratory where we would use our proprietary methods to extract diseased cell samples from the patient's tissue and perform the CELx tests ordered. Test results would typically be available in 10 to 14 days after receipt of the patient specimen. For each patient sample analyzed, a Signaling Function Score would be calculated quantitatively and converted into a final qualitative result: abnormal or normal. For patients found to have an abnormal signaling function, clinicians would use the results of the CELx test as a guide to select a targeted drug that inhibits the abnormal signaling activity identified.

United States

For our first tests, we will target the estimated 4,300 medical oncologists working in hospitals and cancer centers in the United States. We expect to hire domestic sales professionals with typically over 10 years of experience in clinical oncology sales working at leading biopharmaceutical or specialty reference laboratory companies.

In general, we intend to focus our initial sales efforts on building relationships with KOLs and researchers at leading academic research institutions to demonstrate the scientific credibility of our CELx tests. We also plan to build relationships in community oncology practice settings through leading physician networks and community hospitals and community based cancer centers. We will also attend national and regional clinical meetings focused on cancer treatment for our anti-cancer tests.

We believe the unique and important nature of the results our CELx tests provide, and their positioning as a CDx, will drive many medical oncologists to independently seek out our tests once they become aware of them. We believe this may allow us to achieve our market penetration goals with a sales force and marketing expenses significantly less costly than has been experienced by molecular diagnostic companies.

International

We believe we can serve the international market from our laboratory in Minnesota. We expect to establish an international presence using local distributors that sell to physicians and coordinate shipment of specimens to the United States. To serve international markets, we would expect to add dedicated regional managers located outside the United States to oversee our relationships at the local level.

Pricing and Reimbursement

The principal groups that we expect to pay us in the future for our CELx tests include:

- commercial third-party payors;
- government payors, including Medicare and state Medicaid plans;
- biopharmaceutical customers;
- hospitals, cancer centers, and other institutions; and
- patients.

Adequate reimbursement will be an important factor in achieving broad clinical adoption of our CELx tests. At the same time, we believe broad clinical adoption will help drive favorable reimbursement decisions. To achieve broad reimbursement coverage with commercial third-party payors and government payors, including Medicare and Medicaid, we plan to demonstrate the economic and clinical value of our CELx tests to payors by employing a multi-pronged strategy:

- **Set a high bar for analytical validation.** We expect to present data on the reproducibility and precision of CELx tests at conferences and will seek to publish the results in peer-reviewed journals.

- **Meet the evidence standards necessary to be consistent with leading clinical guidelines.** We believe inclusion in leading clinical practice guidelines plays a critical role in payers' coverage decisions. We plan to conduct clinical validation and clinical utility studies that are consistent with the requirements of the widely recognized National Comprehensive Cancer Network clinical practice guidelines.
- **Execute an internal managed care policy and claims adjudication function as part of our core business operations.** We plan to make obtaining adequate and widespread reimbursement a critical component of our business operations. We expect to hire a team of in-house claims processing and reimbursement specialists who will work with patients and payers to navigate the claims process and obtain maximum reimbursement.
- **Cultivate a network of KOLs.** KOLs are able to influence clinical practice by publishing research and determining whether new tests should be integrated into practice guidelines. We expect to collaborate with KOLs early in the development process to ensure our clinical studies are designed and executed in a way that clearly demonstrates the benefits of our tests to physicians and payers.
- **Compile a growing library of peer-reviewed studies that demonstrate the test is effective.** We will seek to publish peer-reviewed articles and review papers to help support our efforts to obtain widespread adoption and reimbursement of our CELx tests. In each disease area we pursue, we intend to conduct studies in order to develop similar supporting literature.
- **Reduce expenditures.** We intend to build economic models to measure the financial benefits of using our CELx test in guiding patient treatment and minimizing the use of drugs that will not likely have a positive impact. We plan to use the data we gather through the use of these models as we meet with commercial third-party payors and government payors.
- **Commercial third-party payors and government payors are increasingly making significant efforts to contain healthcare costs.** A major cost reduction opportunity is to reduce expenditures for drug courses that provide no patient benefit. Our technology will enable physicians to prescribe therapies that have significantly higher response rates than has been the case with targeted therapies to date. Since this will lower the drug cost per responsive patient, we believe widespread use of our CELx tests is consistent with payors goals of delivering health care more cost effectively.

OUR COMPETITION

At present, we are not aware of any other companies that offer diagnostic tests that use a patient's live tumor cells to identify the signaling pathway driving a patient's cancer. There are several companies focused on developing genomic or proteomic analyses of a patient's diseased cells. Initial efforts identified protein targets or genetic mutations, oftentimes referred to as "biomarkers," that are associated with a disease process to enable development of drugs more closely tailored to specific patient populations.

As tools for human genome analysis have become less expensive, a number of companies have also recently launched more complex genomic test panels and gene expression signatures tests. These tests rely on a static measurement of molecular properties and mathematical analysis to identify statistically significant correlations between the selected molecular properties and a clinical condition or outcome of populations of patients with the "same" disease.

These genetic tests often have limited predictive success because they only identify some, but not all of, the molecular and cellular conditions required for a drug therapy to function in a patient. They may identify the presence of the genes associated with a disease but they cannot determine how the gene products function in the context of a particular individual.

Providers of genomic or proteomic tests includes diagnostic kit manufacturers, hospitals and independent laboratories. We do not plan to develop tests where a molecular biomarker can identify drug responsive patients, so our current tests will not compete directly against the tests provided by these other companies. The table below provides a summary of the points of differentiation between our signaling function analysis approach and the molecular approaches used by our potential competitors.

Current Molecular Methods vs. Celcuity's Functional Cellular Analysis Platform

	Type of Cell Sample Used:	
	Dead tumor cells (fixed, lysed)	Live tumor cells
Type of Analysis Performed	Single point-in-time mutation(s) status or protein amount, or activation status	Quantify signaling pathway activity over 24-hour period
Relationship to disease driver	Correlative	Direct Cause
Disease driver evaluated	No. Only a single or small set of components of the cell are evaluated	Yes. The activity of the entire signaling pathway is assessed
Drug function evaluated	No. Cannot assess drug function with dead cells	Yes. Drug's effect on signaling pathway activity in patient's cells quantified
Companies	Foundation Medicine, Caris Life Sciences, NeoGenomics, LabCorp, Quest, Nanostring, Paradigm, Biocept, Exosome Diagnostics, Guardant Health, Roche Diagnostics, Qiagen, Myriad, Genomic Health	Celcuity

We are not aware of any available tests directly comparable to the CELx tests. However, list prices for several proprietary complex genomic tests are listed below and provide guidance as to the pricing of highly informative tests that guide cancer patient care. We expect to offer each CELx test to patients at list prices ranging from \$4,000 to \$7,000, depending on the number of pathways evaluated.

Company	Product	List Price
Genomic Health	Oncotype breast cancer recurrence test	\$4,620 ⁽¹⁾
Foundation Medicine	FoundationOne solid tumor genetic profile test	\$5,800 ⁽²⁾
Veracyte	Afirma thyroid cancer diagnostic test	\$3,200 ⁽³⁾

- (1) Reported in Genomic Health, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2016.
- (2) Reported in Foundation Medicine, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2016.
- (3) Reported in Veracyte, Inc.'s Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

INTELLECTUAL PROPERTY

We believe one of our core competitive advantages is the strength of our intellectual property portfolio. We developed our CELx technology internally. We are seeking both U.S. and non-U.S. patents to protect our inventions. Our patent portfolio currently includes the following:

Subject Matter	Patent/Application #	Status	Priority Date	Expiration
Methods of treating a cancer patient using cell signaling analysis	US 9,404,915	U.S. granted; Europe and Japan pending	6/12/2012	2033
Methods of treating a cancer patient using cell signaling analysis	US 15/192,280	U.S. pending	6/12/2012	2033
Methods of determining the functional status of a cellular pathway	US 15/179,119	U.S. pending	12/12/2013	2034
Methods of diagnosing a cancer patient using cell signaling analysis	US 15/533,897	U.S., Australia, Canada, China, Europe, Japan, South Korea and New Zealand pending	12/12/2014	2035
Methods of creating a patient cell microenvironment	PCT/US2016/057923	PCT pending	10/20/2015	2036
Methods of treating a cancer patient using cell signaling analysis	US 62/473,936	U.S. pending	3/20/2017	2038

We understand we must develop and maintain protection on the proprietary aspects of our technologies in order to remain competitive. We rely on a combination of patents, copyrights, trademarks, trade secret and other intellectual property laws and confidentiality, material transfer agreements, invention assignment agreements and other contracts to protect our intellectual property rights.

We plan to develop names for new products and apply for trademarks and as appropriate secure trademark protection for them, including domain name registration, in relevant jurisdictions. We also have developed a number of proprietary methods, materials, processes, and techniques related to the preparation of patient samples and performance of the CELx test that we believe are most effectively protected as trade secrets rather than as patented subject matter.

RESEARCH AND DEVELOPMENT

We have made significant investments in research and development for our CELx platform. Our annual research and development expenses were approximately \$3.1 million and \$2.0 million for the years ended December 31, 2015 and 2016, respectively.

PRINCIPAL SUPPLIERS

We purchase commercially available reagents and instruments from a variety of suppliers. Our principal reagent suppliers include Bio-Techne Corporation, Selleck Chemicals, Sigma-Aldrich, and VWR International. Our principal instrument suppliers include Acea Biosciences, Integra Biosciences, Invitrogen, and Thermo Fisher Scientific. These items are purchased on a purchase order basis pursuant to the applicable supplier's standard terms and conditions. The items purchased from these suppliers are standard products sold widely to the biotechnology industry. All items purchased are typically available within several days after an order is placed.

GOVERNMENT REGULATION

CLIA and CMS

The CMS regulates all clinical laboratory testing (except research) performed on humans in the U.S. through CLIA. All clinical laboratories that perform clinical lab services on human specimens for the purpose of providing information on the diagnosis, prevention or treatment of disease must receive CLIA certification. This covers approximately 175,000 laboratories as of 2017. Laboratories must obtain CLIA certification and demonstrate compliance with CLIA requirements as confirmed by an inspection by CMS. We received our CLIA certification in 2016. We also had our laboratory certified by the College of American Pathologies, or CAP, in 2016, an organization recognized by CMS as a third party reviewer of clinical laboratories. Several states, including, among others, New York and California, require licensure of out-of-state labs that receive specimens from the state and compliance with the state's individual laboratory regulations.

If our laboratory is out of compliance with CLIA requirements, we may be subject to sanctions such as suspension, limitation or revocation of our CLIA certificate, as well as directed plan of correction, state on-site monitoring, civil money penalties, civil injunctive suit or criminal penalties. We must maintain CLIA compliance and certification to be eligible to bill for services provided to Medicare and Medicaid beneficiaries. If we were to be found out of compliance with CLIA program requirements and subjected to sanction, our business could be harmed. Failure to comply with state licensure laws, if applicable, could subject us to additional sanctions imposed by state licensing authorities.

FDA

FDA approval or clearance is not currently required for CELx tests offered as a stand-alone laboratory developed test. If we are partnered with a drug company to launch a CELx test as a CDx for a new drug indication, we would be required to obtain a Pre-Market Approval, or PMA, in conjunction with the pharmaceutical company seeking a New Drug Approval for the matching therapy. Historically, the FDA has exercised enforcement discretion with respect to tests performed solely in a central laboratory, like the CELx tests, often referred to as Laboratory Developed Tests, or LDTs. The FDA has not required laboratories that furnish only LDTs to comply with the agency's requirements for medical devices (*e.g.*, establishment registration, device listing, quality systems regulations, pre-market clearance or pre-market approval, and post-market controls).

Although the FDA proposed regulations that would apply to LDTs, FDA recently decided that, at present, those regulations are not moving forward towards approval and implementation. In mid-2014, the FDA published a Draft Guidance Document describing a proposed approach for a regulatory framework for LDTs that would have resulted in most of the high-value LDT tests marketed today eventually being required to obtain 510(k) clearance or a Pre-Market Approval. If implemented, this regulatory framework would require most hospital clinical labs to abandon a number of tests it performs or to pursue regulatory clearances or approvals to perform them. These proposals met significant resistance from Congress, the hospital industry, and independent clinical laboratories. The FDA indicated in late 2016 that it does not intend to finalize the 2014 Draft Guidance Document at this time. However, FDA continues to discuss potential regulatory approaches to LDTs.

HIPAA and HITECH

Under the administrative simplification provisions of HIPAA, as amended by the HITECH Act, the U.S. Department of Health and Human Services, or HHS, issued regulations that establish uniform standards governing the conduct of certain electronic healthcare transactions and protecting the privacy and security of protected health information used or disclosed by healthcare providers and other covered entities. HIPAA includes the following primary sets of regulations: privacy regulations, security regulations, and standards for electronic transactions, which establish standards for certain healthcare transactions. The privacy and security regulations were extensively amended in 2013 to incorporate new requirements from the HITECH Act.

The privacy regulations cover the use and disclosure of protected health information by healthcare providers and other covered entities. They also set forth certain rights that an individual has with respect to

his or her protected health information, including, but not limited to, the right to access or amend certain records containing protected health information, or to request restrictions on the use or disclosure of protected health information. The security regulations establish requirements for safeguarding the confidentiality, integrity, and availability of protected health information that is electronically transmitted or electronically stored. The HITECH Act, among other things, makes many of HIPAA's privacy and security standards applicable to business associates of covered entities, and established certain protected health information security breach notification requirements. A covered entity must notify affected individual(s) and the HHS when there is a breach of unsecured protected health information. HIPAA also governs patient access to laboratory test reports. Effective October 6, 2014, individuals (or their personal representatives, as applicable), have the right to access test reports directly from clinical laboratories and to direct that copies of those test reports be transmitted to persons or entities designated by the individual.

These laws impose significant fines and other penalties for improper use or disclosure of protected health information. Additionally, to the extent that we submit electronic healthcare claims and payment transactions that do not comply with the electronic data transmission standards established under HIPAA and the HITECH Act, payments to us may be delayed or denied.

In addition to the federal privacy regulations, there are a number of state laws regarding the privacy and security of health information and personal data that are applicable to our operations. The HIPAA privacy and security regulations establish a uniform federal "floor" that covered entities and business associates must meet and do not supersede state laws that are more stringent or provide individuals with greater rights with respect to the privacy or security of, and access to, their records containing protected health information. The compliance requirements of these various state laws, including additional breach reporting requirements, and the penalties for violation vary widely and new privacy and security laws in this area are evolving. We believe that we have taken the steps required for us to comply with health information privacy and security statutes and regulations in all jurisdictions, both state and federal. However, we may not be able to maintain compliance in all jurisdictions where we do business. Failure to maintain compliance, or changes in state or federal laws regarding privacy or security, could result in civil and/or criminal penalties and could have a material adverse effect on our business.

Federal, State and Foreign Fraud and Abuse Laws

In the United States, there are various fraud and abuse laws with which we must comply and we are potentially subject to regulation by various federal, state and local authorities, including CMS, other divisions of the HHS (e.g., the Office of Inspector General), the U.S. Department of Justice, and individual U.S. Attorney offices within the Department of Justice, and state and local governments. We also may be subject to foreign fraud and abuse laws in connection with our international business activities.

In the United States, the federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce, or in return for patient referrals for, or purchasing, leasing, ordering, recommending or arranging for the purchase, lease or order of, any healthcare item or service reimbursable under a governmental payor program. Courts have stated that a financial arrangement may violate the Anti-Kickback Statute if any one purpose of the arrangement is to encourage patient referrals or other federal healthcare program business, regardless of whether there are other legitimate purposes for the arrangement. The definition of "remuneration" has been broadly interpreted to include anything of value, including gifts, discounts, credit arrangements, payments of cash, consulting fees, waivers of co-payments, ownership interests, and providing anything at less than its fair market value. Recognizing that the Anti-Kickback Statute is broad and may technically prohibit many innocuous or beneficial arrangements within the healthcare industry, the HHS issued a series of regulatory "safe harbors." These safe harbor regulations set forth certain provisions, which, if met, will assure healthcare providers and other parties that they will not be prosecuted under the federal Anti-Kickback Statute. Although full compliance with these provisions protects against prosecution under the federal Anti-Kickback Statute, the failure of a transaction or arrangement to fit within a specific safe harbor does not necessarily mean that the transaction or arrangement is illegal or that prosecution under the federal Anti-Kickback Statute will be pursued. Many states also have anti-kickback statutes, some of which may apply to items or services reimbursed by any third-party payor, including commercial insurers.

In addition, federal false claims laws, including the federal civil False Claims Act, prohibit, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for

payment to, or approval by, the federal government or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes “any request or demand” for money or property presented to the U.S. government. Recently, several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies’ marketing of the product for unapproved, and thus generally non-reimbursable, uses. The civil monetary penalties statute imposes penalties against any person or entity who, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

HIPAA created additional federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

In addition, various states have enacted false claim laws analogous to the federal False Claims Act, although many of these state laws apply where a claim is submitted to any third-party payor and not merely a governmental payor program. If our operations are found to be in violation of any of the federal or state healthcare laws described above or any other governmental regulations that apply to us, we may be subject to significant penalties, including without limitation, civil, criminal and/or administrative penalties, damages, fines, disgorgement, exclusion from participation in government programs, such as Medicare and Medicaid, injunctions, private “qui tam” actions brought by individual whistleblowers in the name of the government, or refusal to allow us to enter into government contracts, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

In Europe, various countries have adopted anti-bribery laws providing for severe consequences, in the form of criminal penalties and/or significant fines, for individuals and/or companies committing a bribery offence. Violations of these anti-bribery laws, or allegations of such violations, could have a negative impact on our business, results of operations and reputation. For instance, in the United Kingdom, under the Bribery Act 2010, which went into effect in July 2011, a bribery occurs when a person offers, gives or promises to give a financial or other advantage to induce or reward another individual to improperly perform certain functions or activities, including any function of a public nature. Bribery of foreign public officials also falls within the scope of the Bribery Act 2010. Under the new regime, an individual found in violation of the Bribery Act 2010 faces imprisonment of up to 10 years. In addition, the individual can be subject to an unlimited fine, as can commercial organizations for failure to prevent bribery.

Federal and State Physician Self-Referral Prohibitions

Under a federal law directed at “self-referral,” commonly known as the “Stark Law,” there are prohibitions, with certain exceptions, on referrals for certain designated health services, including laboratory services, that are covered by the Medicare and Medicaid programs by physicians who personally, or through a family member, have an investment or ownership interest in, or a compensation arrangement with, an entity performing the tests. The prohibition also extends to payment for any testing referred in violation of the Stark Law. A person who engages in a scheme to circumvent the Stark Law’s referral prohibition may be fined up to \$100,000 for each such arrangement or scheme. In addition, any person who presents or causes to be presented a claim to the Medicare or Medicaid programs in violation of the Stark Law is subject to civil monetary penalties of up to \$15,000 per bill submission, an assessment of up to three times the amount claimed and possible exclusion from participation in federal governmental payor programs. Bills submitted in violation of the Stark Law may not be paid by Medicare or Medicaid, and any person collecting any amounts with respect to any such prohibited bill is obligated to refund such amounts. Many states have comparable laws that are not limited to Medicare and Medicaid referrals.

Other Regulatory Requirements

Our operations do not currently use hazardous materials, but we do generate regulated medical waste in the normal course of performing our CELx tests. This subjects us to a variety of federal, state and local environmental and safety laws and regulations. Some of the regulations under the current regulatory structure provide for strict liability, holding a party potentially liable without regard to fault or negligence. We could be held liable for damages and fines as a result of our, or others', business operations should contamination of the environment or individual exposure to hazardous substances occur. We cannot predict how changes in laws or development of new regulations will affect our business operations or the cost of compliance.

New Legislation and Regulations

From time to time, legislation is drafted, introduced and passed in Congress that could significantly change the statutory provisions governing the testing, approval, manufacturing and marketing of products that are or will be regulated by the FDA or CMS. In addition to new legislation, CMS and FDA regulations and policies are often revised or interpreted by the agencies in ways that may significantly affect our business and our products. It is impossible to predict whether further legislative changes will be enacted or FDA or CMS regulations, guidance, policies or interpretations will be changed, or what the impact of such changes, if any, may be. The 2016 presidential election and change in administration make it even more difficult to predict if and how federal regulations may change and/or federal agencies might alter their positions.

Pharmaceutical Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any products for which we sell. Sales of any of our products will depend, in part, on the extent to which the costs of the products will be covered by third-party payors, including government health programs such as Medicare and Medicaid, commercial health insurers, managed care organizations or pharmaceutical companies. The process for determining whether a third-party payor will provide coverage for a test sometimes is separate from the process for setting the price of a drug product or for establishing the reimbursement rate that a payor will pay for the drug product. Third-party payors may limit coverage to specific testing products on an approved list, which might not include all of the tests available for a particular indication.

In order to obtain coverage and reimbursement for any product, we may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of the test. Whether or not we conduct such studies, our products may not be considered medically necessary or cost-effective. A third-party payor's decision to provide coverage for a test does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage, and adequate reimbursement, for the product. Third-party reimbursement may not be sufficient to enable us to maintain price levels high enough to realize an appropriate return on our investment in product development.

The containment of healthcare costs has become a priority of federal, state and foreign governments, and the prices of tests and drugs have been a focus in this effort. Third-party payors are increasingly challenging the prices charged for medical products and services, examining the medical necessity and reviewing the cost-effectiveness of testing products, drug products and medical services and questioning safety and efficacy. If these third-party payors do not consider our products to be cost-effective compared to other available tests, they may not cover our products or, if they do, the level of payment may not be sufficient to allow us to sell our products at a profit. The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost-containment programs to limit the growth of government-paid healthcare costs, including price controls and restrictions on reimbursement. Adoption of such controls and measures, and tightening of restrictive policies in jurisdictions with existing controls and measures, could limit payments for testing products or drugs that require use of our testing products and could adversely affect our net revenue and results.

Pricing and reimbursement schemes vary widely from country to country. Some countries may require the completion of additional studies that compare the cost-effectiveness of a particular test to currently available tests. The downward pressure on healthcare costs in general, particularly prescription drugs and

testing products, has become intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert competitive pressure that may reduce pricing within a country. Any country that has price controls or reimbursement limitations for testing products may not allow favorable reimbursement and pricing arrangements for any of our products.

Coverage policies, third-party reimbursement rates and test pricing regulation may change at any time. In particular, in the United States, the Affordable Care Act contains provisions that have the potential to substantially change healthcare delivery and financing, including impacting the profitability of testing and drugs. For example, the Affordable Care Act revised the methodology by which rebates owed by manufacturers for covered outpatient drugs are calculated under the Medicaid Drug Rebate Program, extended the Medicaid Drug Rebate Program to utilization of covered drugs dispensed to individuals enrolled in Medicaid managed care organizations and subjected manufacturers to new annual fees for certain branded prescription drugs. As the price of our test may be included in the reimbursement rates for certain drugs, this could significantly impact our pricing. Even if favorable coverage and reimbursement status is attained for one or more products, less favorable coverage policies and reimbursement rates may be implemented in the future. However, the proposed repeal of the Affordable Care Act and the uncertainty surrounding a potential replacement law make it even more difficult to predict the future for reimbursement and pricing of drugs and tests in the United States.

CORPORATE HISTORY

We were organized as a Minnesota limited liability company in 2011 and commenced operations in 2012. On September 15, 2017, we converted from a Minnesota limited liability company into a Delaware corporation and changed our name from Celcuity LLC to Celcuity Inc.

FACILITIES

We currently lease and occupy approximately 5,000 square feet in Minneapolis, Minnesota, which includes our clinical laboratory and offices. This lease expires in May 2018 and is renewable annually. We anticipate requiring additional laboratory and office space in the upcoming years, which may require us to re-locate to another leased facility in the Minneapolis area.

EMPLOYEES AND LABOR RELATIONS

As of June 30, 2017, we had 15 employees, each of which were full-time employees. None of our employees are currently covered by collective bargaining agreements and we believe that our relations with our employees are good.

LEGAL PROCEEDINGS

From time to time we may be involved in disputes or litigation relating to claims arising out of our operations. We are not currently a party to any legal proceedings that could reasonably be expected to have a material adverse effect on our business, financial condition and results of operations.

MANAGEMENT

EXECUTIVE OFFICERS AND DIRECTORS

The following individuals are currently serving as our executive officers and directors:

Name	Age	Title
Brian F. Sullivan	55	Chairman of the Board and Chief Executive Officer
Lance G. Laing	55	Chief Science Officer, Vice President, Secretary and Director
Vicky Hahne	51	Chief Financial Officer
Maureen Cronin	64	Director ⁽¹⁾
David F. Dalvey	58	Director ⁽¹⁾
Richard J. Nigon	69	Director ⁽¹⁾

- (1) Ms. Cronin, Mr. Dalvey, and Mr. Nigon each serve as members of the audit, compensation, and nominating and corporate governance committees. For more information regarding the independence of the directors and committee members, see “Independence of our Board and Board Committees” below. For more information regarding our committees, see “Board Committees” below.

EXECUTIVE OFFICERS

Brian F. Sullivan, Chairman and Chief Executive Officer

Mr. Sullivan is our co-Founder and has served as Chairman of the Board and Chief Executive Officer since we commenced operations in 2012. Mr. Sullivan has over 25 years of experience founding and building successful, high growth technology companies. He was Chairman and CEO of SterilMed, a medical device reprocessing company, from 2003, when he led an investment group to acquire a majority interest, until its sale to Ethicon Endo-Surgery Inc., a Johnson & Johnson company, for \$330 million in 2011. Previously, he was co-founder and Chief Executive Officer of Recovery Engineering, a filtration company, which he took public and subsequently sold to Procter & Gamble for \$265 million in 1999. Since 2003, Mr. Sullivan has served on the board of directors of Entegris, Inc., a publicly-held company. Mr. Sullivan has received four U.S. patents and has several pending. He graduated magna cum laude with distinction from Harvard College with an A.B. in economics. Among other attributes, skills, and qualifications, the board of directors believes Mr. Sullivan is uniquely qualified to serve as a director based on his extensive operational and business development experience, and his knowledge in building stockholder value, growing a company from inception and navigating significant corporate transactions and the public company process.

Lance G. Laing, Ph.D., Chief Science Officer, Vice President, Secretary and Director

Dr. Laing is our co-Founder and has served as Chief Science Officer, Vice President, Secretary and Director since we commenced operations in 2012. Dr. Laing’s career spans more than 15 years in drug discovery research and technology development. He received his doctorate in biophysics and biochemistry from The Johns Hopkins University and completed a National Institutes of Health post-doctoral fellowship at Washington University Medical School. He has received 17 U.S. patents and has an additional 24 U.S. patents pending. His drug discovery research career began at Scriptgen/Anadys Pharmaceuticals (purchased by Novartis), where he worked under Professor Peter Kim, who became President of Merck Research. He also was Director of Chemistry and Bioapplications and Director of Detection Product Development for two companies that each developed instruments similar to those Celcuity uses to perform the CELx tests. His work at these two instrument companies gave him unique expertise and experience in developing a variety of patented applications for these instruments. Most recently, he served as an executive director for an international drug discovery and development company. Among other attributes, skills, and qualifications, the board of directors believes Dr. Laing is uniquely qualified to serve as a director based on his significant research, medical and scientific expertise.

Vicky Hahne, Chief Financial Officer

Ms. Hahne joined as our Chief Financial Officer in July 2017. She has more than 20 years of financial leadership experience, including the most recent 10 years in the healthcare industry. Prior to joining Celcuity, Ms. Hahne served as Controller of Respiratory Technologies Inc., a medical device manufacturer, from 2015 to 2017. While at Respiratory Technologies, she played a key role in the due diligence process to sell the company to Koninklijke Philips. In 2014, she served as Controller for Ability Network Inc., a healthcare information technology company. From 2007 to 2012, Ms. Hahne served as Controller of Sterilmed Inc., a medical device reprocessing company, where she was significantly involved in the sale of the company to Johnson & Johnson. Prior to these roles, Ms. Hahne held several senior financial positions at SimonDelivers Inc., including Chief Financial Officer. Ms. Hahne has extensive experience in early stage, high growth companies with responsibilities including financial controls and stewardship, financial analysis, mergers and acquisitions, building infrastructure and systems. She received a B.S. degree in Finance and Accounting from Northern State University and received her CPA certificate in 1990.

NON-EMPLOYEE DIRECTORS

Maureen Cronin, Ph.D., Director

Dr. Cronin is currently Executive Director of Research Informatics at Celgene Corporation, where she has served since 2012. Dr. Cronin's career spans more than 25 years in biotechnology research and development and drug discovery research. She has served at seven biotechnology or molecular diagnostics startups, including service as a senior research executive at two leading oncology precision medicine diagnostics companies. From 2001 to 2010, she was Vice President of Research at Genomic Health, Inc. and from 2010 to 2012, she was Vice President of Research and Development at Foundation Medicine, Inc. Her technology research and development career began at Affymetrix (purchased by Thermo Fisher). She currently serves as a director of a privately-held company. She received her doctorate in physiology and pharmacology from University of California, San Diego as a Regents' Fellow and completed a UCSD post-doctoral fellowship at the San Diego VA Hospital. She has been named an inventor on 17 U.S. and 11 European patents and has authored or coauthored more than 40 peer reviewed publications. Her work at diagnostics and drug development companies gives her unique expertise and experience in developing and delivering precision medicine tests. Among other attributes, skills, and qualifications, the board of directors believes Ms. Cronin is uniquely qualified to serve as a director based on her significant diagnostics research and applied scientific expertise.

David F. Dalvey, Director

Mr. Dalvey has served as a member of Celcuity's board of directors since February 2014. He was designated to serve as a board member by certain institutional investors of Celcuity pursuant to an agreement entered into in connection with such investors' purchase of equity units of the company. Mr. Dalvey has more than 30 years of experience in the fields of corporate finance and venture capital, working primarily with growth-oriented technology and life-science businesses. He has over 10 years of corporate finance advisory experience with two national investment banks, completing over 150 individual transactions. He has been the General Partner of Brightstone Venture Capital, a venture capital management company, since September 2000. Brightstone is a 25 year old venture capital management company that has raised and managed ten venture partnerships. Previously, he held management positions with R.J. Steichen and Company, an investment bank, from 1995 to 2000, The Food Fund LP, a venture capital firm, from 1992 to 1995 and Wessels, Arnold & Henderson, an investment bank, from 1987 to 1992. Mr. Dalvey served on the board of directors for Navarre Corporation (now Speed Commerce, Inc.) from 2009 until November 2012, on the board of managers for Blue Rock Market Neutral Fund, a mutual fund registered under the Investment Company Act of 1940 from 2000 to 2014 and on the board of directors for Digitiliti, Inc. from July 2011 until October 2012. Mr. Dalvey has significant operational exposure as a board director or advisor to many other public and privately held growth businesses and has served on these companies' audit, strategic or governance committees, including companies such as HomeSpotter, Definity Health, AppTec Laboratories, CHF Solutions, BiteSquad, Agiliti, and Nature Vision. Mr. Dalvey received a B.S. in Business/Management Economics from University of Minnesota. Among other

attributes, skills, and qualifications, the board of directors believes Mr. Dalvey is uniquely qualified to serve as a director based on his leadership experience in operating both public and private companies and his experience working in the investment community and with investment firms enable him to bring valuable insight and knowledge to our board of directors.

Richard J. Nigon, Director

Mr. Nigon is currently Senior Vice President of Cedar Point Capital, LLC., a private company that raises capital for early stage companies, where he has served since 2007. Mr. Nigon has also been a board member for Tactile Systems Technology since September 2012 and Northern Technologies International Corp. since February 2010, including its non-executive Chairman of the board of directors since November 2012. Mr. Nigon also serves as a director of several private companies. Mr. Nigon previously served as a board member for Vascular Solutions, Inc. from November 2000 to February 2017, when it was acquired by Teleflex, Incorporated and as a board member for Virtual Radiologic Corporation from May 2007 until it was acquired in July 2010. From February 2001 until December 2006, Mr. Nigon was a Director of Equity Corporate Finance for Miller Johnson Steichen Kinnard, a privately held investment firm, which was acquired in December 2006 by Stifel Nicolaus, a brokerage and investment banking firm. After that acquisition, Mr. Nigon became a Managing Director of Private Placements of Stifel Nicolaus until May 2007. From February 2000 to February 2001, Mr. Nigon served as the Chief Financial Officer of Dantis, Inc., a web hosting company. Prior to joining Dantis, Mr. Nigon was employed by Ernst & Young LLP from 1970 to 2000, where he served a partner from 1981 to 2000. While at Ernst & Young, Mr. Nigon served as the Director of Ernst & Young's Twin Cities Entrepreneurial Services Group and was the coordinating partner on several publicly-traded companies in the consumer retailing and manufacturing sectors. We believe Mr. Nigon is qualified to serve on our board of directors because of his extensive public accounting and auditing experience, including particular experience with emerging growth companies. We also feel that he will bring to the board of directors a strong background in financial controls and reporting, financial management, financial analysis, SEC reporting requirements and mergers and acquisitions. His strategic planning expertise gained through his management and leadership roles at private investment firms also makes him well-suited to serve as a member of our board of directors.

OTHER SENIOR MANAGEMENT

Laura Beggrow, RN, Chief Commercial Officer

Ms. Beggrow, 54, joined as our Chief Commercial Officer in June 2016. She has more than 20 years of sales and marketing leadership experience in the pharmaceutical and molecular diagnostic industry, including service as a Chief Commercial Officer, VP Sales and Marketing and President. Between 2004 and 2013, Ms. Beggrow served in various sales and marketing leadership positions at one of the leading molecular diagnostic companies in the U.S., Genomic Health, Inc. During her tenure, her roles included V.P. U.S. Sales and Marketing and V.P. U.S. Sales, and she led successful launches of several key products. From 2013 to 2014, she served as President of Strand Diagnostics, Inc., where she provided commercial and operational leadership. From 2014 to 2015, she was Chief Commercial Officer of NantHealth, an early stage company developing a suite of molecular diagnostic products. Ms. Beggrow has a proven track record of successfully launching products, developing strategic product portfolio plans, and building market leading sales organizations. Prior to these roles, Ms. Beggrow served in various sales and sales management positions at Rhone-Poulenc Rorer, Genentech, Cell Therapeutics and Abbott Laboratories. She received a B.S. in Nursing from The Ohio State University.

Larry Fitzgerald, VP Strategic Partnerships and Managed Markets

Mr. Fitzgerald, 46, joined as our VP Strategic Partnerships and Managed Markets in June 2016. Mr. Fitzgerald has over 20 years of experience in the pharmaceutical and molecular diagnostics industry, serving in various sales, sales management, reimbursement, and business development roles. Between 2004 and 2013, Mr. Fitzgerald served as a Senior Regional Manager and National Accounts Manager at one of the leading molecular diagnostic companies in the U.S., Genomic Health, Inc. During his tenure, he was responsible for developing and executing reimbursement strategies with regional and national health insurance payor groups and leading sales activities directed towards large group practices. From 2013 and

2014, Mr. Fitzgerald served as Head of Strategic Partnerships and Payors at Invitae Corporation, an early-stage genetic testing company. From 2014 and 2015, he served as VP Sales Strategy and Managed Markets at NantHealth, an early stage company developing a suite of molecular diagnostic products. He began his career in pharmaceutical sales at Johnson and Johnson, Amgen and Novartis. Mr. Fitzgerald has a proven track record of driving product adoption and executing reimbursement strategies for newly launched pharmaceuticals and diagnostic tests. Mr. Fitzgerald received his B.S. in Finance from the University of Florida.

FAMILY RELATIONSHIPS

Dr. Laing, our Chief Science Officer and Director, is a brother-in-law of Mr. Sullivan, our Chairman and Chief Executive Officer.

INVOLVEMENT IN CERTAIN LEGAL PROCEEDINGS

To the best of our knowledge, none of our directors or executive officers have, during the past ten years, been involved in any legal proceedings described in subparagraph (f) of Item 401 of Regulation S-K.

BOARD COMPOSITION

Our bylaws provide that the size of our board of directors will be determined from time to time by resolution of our board of directors. Our board of directors consists of five directors, three of whom qualify as independent directors under the rules and regulations of the SEC and The Nasdaq Capital Market.

ELECTION OF DIRECTORS

Our bylaws provide that members of our board of directors will be elected by a majority vote of our stockholders; provided however, if the number of nominees exceeds the number of directors to be elected at a stockholders meeting, the election of directors will be by a plurality of the votes.

INDEPENDENCE OF OUR BOARD AND BOARD COMMITTEES

Rule 5605 of the Nasdaq Marketplace Rules, or the Nasdaq Listing Rules, requires a majority of a listed company's board of directors be "independent" as defined in Nasdaq Listing Rule 5605(a)(2) within one year of listing. In addition, the Nasdaq Listing 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.

Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family and other relationships, including those relationships described under "Certain Relationships and Related Party Transactions," we believe that none of our non-employee directors, representing three of our five directors, will have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors are deemed "independent" as that term is defined under Rule 5605(a)(2) of the Nasdaq Listing Rules. Mr. Sullivan and Dr. Laing are not be considered independent because of their service as our Chief Executive Officer and Chief Science Officer, respectively.

Each director who serves as a member of the audit, compensation, and nominating and corporate governance committees satisfies the independence standards for such committees established by the SEC and the Nasdaq Listing Rules, as applicable. In making these determinations on the independence of our directors, our board of directors considered the relationships that each such non-employee director has with the 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.

LEADERSHIP STRUCTURE OF THE BOARD

Our bylaws provide our board of directors with flexibility to combine or separate the positions of Chairman of our board of directors and Chief Executive Officer and/or the implementation of a presiding

or lead director in accordance with its determination that utilizing one or the other structure would be in the best interests of the company. Mr. Sullivan will initially serve as the Chairman of our board of directors. We believe that this leadership structure is appropriate at this time because:

- it promotes unified leadership and direction for the company;
- it allows for a single, clear focus for management to execute the company's strategic initiatives and business plans;
- our Chief Executive Officer is in the best position to chair board meetings and to ensure that the key business issues and risks facing the company are brought to the board's attention; and
- we can more effectively execute our strategy and business plans to maximize stockholder value if the Chairman of the board of directors is also a member of the management team.

Our board of directors will periodically review our leadership structure and may make such changes in the future as it deems appropriate.

ROLE OF BOARD IN RISK OVERSIGHT PROCESS

Our board of directors has oversight responsibility for the company's risk management process. The board of directors administers its oversight function through its committees, but retains responsibility for general oversight of risks. The committee chairs are responsible for reporting findings regarding material risk exposure to the board of directors as quickly as possible. The board of directors delegates to the audit committee oversight responsibility to review our code of ethics, including whether the code of ethics is successful in preventing illegal or improper conduct, and our management's risk assessments and management's financial risk management policies, including the policies and guidelines used by management to identify, assess and manage our exposure to financial risk. Our compensation committee assesses and monitors any major compensation-related risk exposures and the steps management should take to monitor or mitigate such exposures.

BOARD COMMITTEES

Our board of directors has three standing committees: an audit committee, a compensation committee and a nominating and corporate governance committee. Under the Nasdaq Listing Rules, the membership of the audit committee is required to consist entirely of independent directors, subject to applicable phase-in periods. The following is a brief description of our committees:

Audit Committee

We have established an audit committee in accordance with Section 3(a)(58)(A) of the Exchange Act. The primary duties and responsibilities of our audit committee are to oversee (1) the integrity of our accounting and financial reporting processes and the audits of our financial statements; (2) our systems of internal controls; (3) our code of ethics and business conduct; and (4) our compliance with legal and regulatory requirements. In addition, our audit committee appoints and monitors the independence, qualifications and performance of our independent auditors, provides an avenue of communication between our independent auditors, management and the board of directors and reviews and approves related party transactions as required by the NASDAQ Listing Rules.

Ms. Cronin, Mr. Dalvey and Mr. Nigon are the members of our audit committee. The members of the audit committee are "independent directors" as that term is defined in Rules 5605(a)(2), 5605(c)(2)(A), and Rule 10A-3 of the Nasdaq Listing Rules as promulgated under the Exchange Act. The audit committee has at least one member that is an "audit committee financial expert" as defined by Item 407(d)(5)(ii) of Regulation S-K. The audit committee operates under a written charter that satisfies the applicable standards of the SEC and The Nasdaq Capital Market.

Compensation Committee

We have established a compensation committee. In general, our compensation committee will review and make recommendations regarding the compensation of our board of directors, executive officers and certain other key employees.

Our compensation committee has approved the compensation arrangements currently in place for our named executive officers. The compensation committee evaluates the performance of our Chairman and Chief Executive Officer and determines his compensation based on this evaluation without our Chairman and Chief Executive Officer present during voting or deliberations on his compensation. With respect to the other named executive officers, the compensation committee considers the recommendations of our Chairman and Chief Executive Officer as to performance evaluations and recommended compensation arrangements. The compensation of all named executive officers is subject to the final approval of the committee. The compensation committee reviews and advises our board of directors on bonus and equity awards, and performance objectives for future compensation.

Ms. Cronin, Mr. Dalvey and Mr. Nigon are the members of our compensation committee. The compensation committee charter requires that members of the compensation committee be “independent directors” as that term is defined in Rule 5605(a)(2) of the Nasdaq Listing Rules, qualify as “non-employee directors” under Rule 16b-3 of the Exchange Act and “outside directors” under Section 162(m) of the Code, and be free from any other relationship that would interfere with the exercise of independent judgment as a member of the committee.

Nominating and Corporate Governance Committee

We have established a nominating and corporate governance committee. Ms. Cronin, Mr. Dalvey and Mr. Nigon are the members of our nominating and corporate governance committee. The nominating and corporate governance committee charter requires that members of the committee be “independent directors” as that term is defined in Rule 5605(a)(2) of the Nasdaq Listing Rules. The principal functions of the nominating and corporate governance committee are to:

- develop and recommend to the board of directors minimum qualifications for director nominees;
- identify and evaluate potential candidates for the board of directors and committee positions;
- recommend to the board of directors a slate of nominees for election as directors at our annual meetings of stockholders;
- recommend to the board of directors individuals to be appointed to the board of directors in connection with vacancies or newly created director positions and the termination of directors for cause or other appropriate reasons;
- review the size and composition of the board of directors and committees;
- oversee our corporate governance practices;
- evaluate and make recommendations regarding stockholder proposals submitted to the board of directors for inclusion in the company’s proxy statement; and
- develop, recommend and oversee an annual self-evaluation process for the board of directors and its committees of the board of directors.

BOARD DIVERSITY

Our nominating and corporate governance committee is responsible for reviewing with our board of directors, on an annual basis, the appropriate characteristics, skills and experience required for our board of directors as a whole and its individual members. In evaluating the suitability of individual candidates (both new candidates and current members), the nominating and corporate governance committee, in recommending candidates for election, and our board of directors, in approving (and, in the case of vacancies, appointing) such candidates, will take into account many factors, including the following:

- personal and professional integrity;
- ethics and values;
- experience in corporate management, such as serving as an officer or former officer of a publicly held company;
- experience in the industries in which we compete;

- experience as a board member or executive officer of another publicly held company;
- diversity of expertise and experience in substantive matters pertaining to our business relative to other board members;
- conflicts of interest; and
- practical and mature business judgment.

CODE OF ETHICS

We have adopted a code of ethics applicable to our principal executive officer and principal financial and accounting officer, in accordance with Section 406 of the Sarbanes-Oxley Act, the rules of the SEC promulgated thereunder, and the Nasdaq Listing Rules. In the event that any changes are made or any waivers from the provisions of the code of ethics are made, these events would be disclosed on our website or in a report on Form 8-K within four business days of such event. The code of ethics is posted on our website at www.celcuity.com. Copies of the code of ethics can be provided free of charge upon written request directed to Investor Relations, Celcuity Inc., 16305 36th Avenue N., Suite 450, Minneapolis, Minnesota 55446.

COMPENSATION COMMITTEE INTERLOCKS

The compensation committee is composed entirely of directors who are not our current or former employees, each of who meets the applicable definition of “independent” in the current rules of the under the listing standards of Nasdaq and SEC rules and regulations. None of the members of the compensation committee during the fiscal year ended December 31, 2016 was an executive officer of a company of which one of our executive officers is a director. The compensation committee is responsible for establishing and administering our executive compensation policies. Our compensation committee does not have any interlocks with other companies. Prior to establishing the compensation committee, our full board of directors made decisions relating to the compensation of our officers. For a description of any transactions between us and members of our compensation committee and affiliates of such members, please see “Certain Relationships and Related Party Transactions.”

EXECUTIVE AND DIRECTOR COMPENSATION

OVERVIEW

The compensation of our executive officers is structured with the goal of providing a competitive compensation program that will enable us to attract and retain highly-qualified executives, which is necessary to achieve our financial and strategic objectives and create long-term value for our stockholders. Our Chief Executive Officer, Chief Financial Officer, and Chief Science Officer (collectively, our “named executive officers”) are currently compensated with a base salary and milestone-based incentive pay. In addition, we had an equity incentive plan, under which we granted options and other equity awards to our named executive officers, employees, directors, consultants and independent contractors. Following the LLC Conversion, we ceased making grants under this equity incentive plan and adopted a new equity incentive plan to replace the existing plan. See the “Employee Benefits and Stock Plans” subsection below for additional information on these plans.

SUMMARY COMPENSATION TABLE

The following table presents information regarding compensation awarded to, earned by, or paid to our named executive officers for the fiscal years ended December 31, 2016 and 2015:

Name and Position	Year	Salary (\$)	Total (\$)
Brian F. Sullivan	2016	\$214,077 ⁽¹⁾	\$214,077
Chief Executive Officer and Chief Financial Officer	2015	\$205,077 ⁽¹⁾	\$205,077
Lance G. Laing	2016	214,077	\$214,077
Chief Science Officer	2015	205,077	\$205,077
Vicky Hahne	2016	— ⁽²⁾	— ⁽²⁾
Chief Financial Officer	2015	— ⁽²⁾	— ⁽²⁾

- (1) \$100,000 of the salary amount reported for Mr. Sullivan for each of the fiscal years ended December 31, 2016 and 2015, respectively, was accrued but not paid to Mr. Sullivan. Mr. Sullivan will continue to receive \$100,000 of his annual salary on an accrued, but not paid basis, until such compensation arrangement is changed by our board of directors. As of June 30, 2017, the amount of accrued compensation owed to Mr. Sullivan was \$226,154.
- (2) Ms. Hahne was appointed our Chief Financial Officer on July 5, 2017. The position was previously held by Mr. Sullivan. She was not previously employed by the Company and had no salary or other compensation for the fiscal years ended December 31, 2016 and 2015.

MILESTONE INCENTIVE PAY

We provide our named executive officers and other senior managers the opportunity to earn incentive payments under a milestone-based incentive pay program. Payments under the incentive program are based on our achievement of milestones that advance our core business strategy. Milestones currently in effect are the establishment of CDx development programs with pharmaceutical companies. Future milestones will be established by our compensation committee. Each participant is granted the opportunity to earn incentive pay up to a maximum percentage of his or her base salary. The maximum milestone based incentive pay for each of our named executive officers is 40% of base salary. Incentive payments under the incentive program are made partly in cash and partly in the form of equity awards. Incentive payments to our named executive officers will be paid 25% in cash and 75% in the form of equity awards. No incentive payments were made under the program for the fiscal years ended December 31, 2016 or 2015.

EMPLOYMENT AGREEMENTS, SEVERANCE AND CHANGE IN CONTROL AGREEMENTS

We have not entered into employment agreements, severance agreements or change-of-control agreements with our named executive officers. Mr. Sullivan, Ms. Hahne, and Dr. Laing have each entered into a confidentiality, assignment of inventions and non-competition agreement with us, which provides,

among other things, that the named executive officer will not engage in a competitive business or solicit our employees or consultants for a period of 24 months after termination of employment.

OUTSTANDING EQUITY AWARDS AT FISCAL 2016 YEAR-END

Our named executive officers did not hold any outstanding equity awards as of December 31, 2016.

EMPLOYEE BENEFIT AND STOCK PLANS

2012 Equity Incentive Plan

Our 2012 Equity Incentive Plan, or 2012 Plan, was adopted by the board of governors and approved by the members of Celcuity LLC on August 10, 2012, and was subsequently amended on November 12, 2012. The 2012 Plan provides for unit options, restricted unit awards, performance unit awards or unit bonuses. The exercise price of each unit option granted under our 2012 Plan is not less than one hundred percent (100%) of the fair market value of one unit on the date of grant. The maximum permitted term of options granted under our 2012 Plan is ten years. Our board of governors has administered the plan and determined the provisions of incentive awards, including eligible recipients, number of units subject to an incentive award, exercise price, vesting schedule, duration of an incentive award and other restrictions an incentive award may be subject to. In the event of our merger, consolidation, sale of substantially all assets, liquidation or dissolution or other change of control, the 2012 Plan provides that the board of governors may accelerate the exercisability of awards, terminate the 2012 Plan and unexercised awards, continue the 2012 Plan with respect to outstanding awards, replace or exchange incentive awards for similar securities of the successor, substitute the awards with similar awards of the successor or provide for cash payment for outstanding awards (net of exercise price).

As of June 30, 2017, on a post-LLC Conversion basis, we had reserved 625,000 shares of common stock for issuance under our 2012 Plan. As of June 30, 2017, on a post-LLC Conversion basis, options to purchase 442,685 of these shares were issued and remained outstanding and 182,315 of these shares remained available for future grant. The options outstanding as of June 30, 2017 had a weighted-average exercise price of \$6.78 per share. In connection with the LLC Conversion, the outstanding awards under the 2012 Plan have been adjusted to reflect the LLC Conversion (including number of shares and exercise prices). We have ceased granting any additional awards under the 2012 Plan. However, any outstanding options granted under the 2012 Plan, as adjusted to reflect the LLC Conversion, will remain outstanding subject to the terms of our 2012 Plan and the related option agreements until such outstanding options are exercised or until they terminate or expire by their terms. As of June 30, 2017, no restricted unit awards, performance unit awards or unit bonuses have been granted under the 2012 Plan. Such awards would have had terms similar to the terms described below for the counterpart awards (post-LLC Conversion) that may be granted under our 2017 Equity Incentive Plan.

2017 Stock Incentive Plan

Our 2017 Stock Incentive Plan, or 2017 Plan, was adopted by our board of directors on September 6, 2017 and became effective immediately following the LLC Conversion. We have reserved 750,000 shares of our common stock to be issued under our 2017 Plan. The number of shares reserved for issuance under our 2017 Plan will increase automatically on January 1 of each of 2019 through 2027 by the number of shares equal to 1.0% of the aggregate number of outstanding shares of our common stock as of the immediately preceding December 31. However, our board of directors may reduce the amount of the increase in any particular year. In addition, the following shares will again be available for grant and issuance under our 2017 Plan:

- shares subject to options or stock appreciation rights granted under our 2017 Plan that cease to be subject to the option or stock appreciation right for any reason other than exercise of the option or stock appreciation right;
- shares subject to awards granted under our 2017 Plan that are subsequently forfeited or repurchased by us at the original issue price;

- shares subject to awards granted under our 2017 Plan that otherwise terminate without shares being issued; and
- shares surrendered, cancelled or exchanged for cash or a different award (or combination thereof).

Awards Available

Our 2017 Plan authorizes the award of stock options, restricted stock awards, or RSAs, stock appreciation rights, or SARs, restricted stock units, or RSUs, performance awards and stock bonuses. No person will be eligible to receive more than 250,000 shares in any calendar year under our 2017 Plan other than a new employee of ours, who will be eligible to receive no more than 500,000 shares under the 2017 Plan in the calendar year in which the employee commences employment. No more than 750,000 shares will be issued pursuant to the exercise of incentive stock options.

Our 2017 Plan provides for the grant of awards to our employees, directors, consultants, independent contractors and advisors, provided the consultants, independent contractors, directors and advisors are natural persons that render services not in connection with the offer and sale of securities in a capital-raising transaction. The awards granted may vest based on time and/or achievement of performance conditions.

Our compensation committee may provide for options to be exercised only as they vest or to be immediately exercisable with any shares issued on exercise being subject to our right of repurchase that lapses as the shares vest. The exercise price of stock options must be at least equal to the fair market value of our common stock on the date of grant. The maximum term of options granted under our 2017 Plan is ten years.

A RSA is a grant by us of shares of our common stock subject to restrictions. The price (if any) of an RSA will be determined by the compensation committee. Unless otherwise determined by the compensation committee at the time of award, vesting will cease on the date the participant no longer provides services to us and unvested shares will be forfeited to or repurchased by us.

SARs provide for a payment, or payments, in cash or shares of our common stock, to the holder based upon the difference between the fair market value of our common stock on the date of exercise and the stated exercise price up to a maximum amount of cash or number of shares.

RSUs represent the right to receive shares of our common stock at a specified date in the future, subject to forfeiture of that right because of termination of employment or failure to achieve certain performance conditions. If an RSU has not been forfeited, then on the date specified in the RSU agreement, we will deliver to the holder of the restricted stock unit whole shares of our common stock (which may be subject to additional restrictions), cash or a combination of our common stock and cash.

Performance shares are performance awards that cover a number of shares of our common stock that may be settled cash or by issuance of the underlying shares. These awards are subject to forfeiture prior to settlement because of termination of employment or failure to achieve the performance conditions.

Stock bonuses may be granted as additional compensation for service or performance and, therefore, will not be issued in exchange for cash.

Transferability

Awards granted under our 2017 Plan may not be transferred in any manner other than by will or by the laws of descent and distribution or as determined by our compensation committee. Unless otherwise permitted by our compensation committee, stock options may be exercised during the lifetime of the optionee only by the optionee or the optionee's guardian or legal representative. Options granted under our 2017 Plan generally may be exercised for a period of three months after the termination of the optionee's service to us, for a period of 12 months in the case of death or disability, or such longer period as our compensation committee may provide. Options generally terminate immediately upon termination of employment for cause.

Certain Adjustments

In the event there is a specified type of change in our capital structure without our receipt of consideration, such as a stock split, appropriate adjustments will be made to the number of shares reserved under our 2017 Plan, the maximum number of shares that can be granted in a calendar year and the number of shares and exercise price, if applicable, of all outstanding awards under our 2017 Plan.

Change of Control and Other Corporate Events

Our 2017 Plan provides that, in the event of specified types of mergers or consolidations, a sale, lease, or other disposition of all or substantially all of our assets or other corporate transactions, outstanding awards under our 2017 Plan may be assumed or replaced by any surviving or acquiring corporation; the surviving or acquiring corporation may substitute similar awards for those outstanding under our 2017 Plan; outstanding awards may be settled for the full value of such outstanding award (whether or not then vested or exercisable) in cash, cash equivalents, or securities (or a combination thereof) of the successor entity with payment deferred until the date or dates the award would have become exercisable or vested; or outstanding awards may be terminated for no consideration. Our board of directors or its compensation committee has the discretion to provide that a stock award under our 2017 Plan will immediately vest as to all or any portion of the shares subject to the stock award at the time of a corporate transaction or in the event a participant's service with us or a successor entity is terminated actually or constructively within a designated period following the occurrence of the transaction. Stock awards held by participants under our 2017 Plan will not vest automatically on such an accelerated basis unless specifically provided in the participant's applicable award agreement. In the event of a corporate transaction, the vesting of all awards granted to non-employee directors shall accelerate and such awards shall become exercisable (as applicable) in full upon the consummation of the corporate transaction.

Termination/Amendment

Our 2017 Plan will terminate ten years from the date our board of directors adopted the plan, unless it is terminated earlier by our board of directors. Our board of directors may amend or terminate our 2017 Plan at any time. Our board of directors generally may amend our 2017 Plan, without stockholder approval unless required by applicable law.

Plan Administration

Our 2017 Plan is administered by our compensation committee, all of the members of which are outside directors as defined under applicable federal tax laws, or by our board of directors acting in place of our compensation committee. The compensation committee has the authority to construe and interpret our 2017 Plan, grant awards and make all other determinations necessary or advisable for the administration of the plan.

2017 Employee Stock Purchase Plan

Purpose

The purpose of our employee stock purchase plan, or ESPP, is to provide our employees with an opportunity to purchase shares of our common stock through periodic payroll deductions. The ESPP was adopted by our board of directors on September 6, 2017, subject to stockholder approval at our next meeting of stockholders. If our stockholders do not approve the ESPP, it will be terminated and all contributions returned to the participants without the purchase of any shares.

Shares Available

We have reserved a total of 100,000 shares for issuance under the ESPP, none of which have been issued as of the date of this prospectus. The number of shares authorized and reserved for issuance under the ESPP will be automatically increased on the first day of each of our fiscal years beginning in 2019 by the number of shares equal to 0.5% of the total outstanding number of shares of common stock. However, our board of directors may reduce the amount of the increase in any particular year. Unless terminated earlier by our board of directors, our ESPP will terminate on September 6, 2027.

Eligibility

All employees are eligible to participate in the ESPP unless they are employed for less than 20 hours per week or own 5% or more of the total combined voting power or value of our common stock.

Purchasing Shares

The ESPP is administered using overlapping 24 month offering periods, (each referred to as an Offering Period). A new Offering Period begins every six months on May 1 and November 1 of each year. Eligible employees must complete a subscription agreement prior to the first day of an Offering Period, or the Offering Date, to participate in an Offering Period. The subscription agreement must include the percentage of the employee's regular cash compensation that he or she would like to deduct from their payroll check during each pay period. Employees may deduct 1% to 10% of their regular cash compensation from each payroll check to apply to the ESPP.

Each Offering Period has four (4) six-month Purchase Periods (each referred to as a Purchase Period), which begin on May 1 and November 1 of each year. Employee payroll deductions for participating employees are accumulated until the last day of each Purchase Period, currently April 30 and October 31, or the Purchase Date. On the Purchase Date, the employee's payroll deductions are used to purchase shares of common stock at 85% of the fair market value of a share of common stock on either the Offering Date or the Purchase Date, whichever is lower. If the Purchase Date has a lower price, the employee will automatically be placed in the Offering Period beginning immediately after the Purchase Date.

The ESPP places a limit on the value and number of shares of common stock each employee may purchase. Each employee may purchase a maximum of 2,000 shares per Purchase Period and a maximum of 8,000 shares per Offering Period. The fair market value of shares of common stock purchased by each employee cannot exceed \$25,000 in any calendar year.

Withdrawal and Termination

By giving written notice, each employee may withdraw the entire amount accumulated under the ESPP during a Purchase Period prior to the Purchase Date. Upon an employee's termination of employment for any reason, including retirement or death, the employee's participation in the ESPP is automatically terminated.

If the company is dissolved or liquidated, any Purchase Period or Offering Period will terminate immediately prior to the dissolution or liquidation. If we sell substantially all of our assets to another company or engage in a merger or consolidation where our stockholders will own less than 50% of shares of stock in the resulting company, the ESPP will either be assumed by the successor entity or a new Purchase Date will be set before the transaction is completed, after which the ESPP will terminate.

Plan Administration

The board of directors, or a committee appointed by them, interprets, supervises and administers the ESPP and has the authority to adopt, amend and rescind any rules governing the ESPP so long as they are consistent with the terms of the ESPP. For example, the board of directors has the ability to change the duration and frequency of Offering Periods and Purchase Periods as well as the maximum and minimum percentages of regular cash contribution employees may contribute to purchase stock. Additionally, in the event of reorganization, recapitalization, consolidation, merger or other increase or reduction in the number of shares of common stock outstanding, the board of directors has the discretion to adjust the number of shares reserved under the ESPP as well as the price paid per share for common stock purchased under the ESPP.

NON-EMPLOYEE DIRECTOR COMPENSATION

Following the completion of this offering, we intend to adopt a policy for compensating our non-employee directors with a combination of cash and equity. We expect that shortly after the consummation of this offering the compensation committee will recommend equity awards in the form of restricted stock units and/or stock options for our board of directors under the 2017 Plan.

Our non-employee directors received no compensation for the years ended December 31, 2015 and 2016.

LIMITATIONS ON LIABILITY AND INDEMNIFICATION MATTERS

Our certificate of incorporation contains provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by the Delaware General Corporation Law. Consequently, our directors are not personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

Our certificate of incorporation and our bylaws require us to indemnify our directors and officers to the maximum extent not prohibited by the Delaware General Corporation Law and allow us to indemnify other employees and agents as set forth in the Delaware General Corporation Law. Subject to certain limitations, our bylaws also require us to advance expenses incurred by our directors and officers for the defense of any action for which indemnification is required or permitted.

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

We believe that these indemnification provisions and agreements are necessary to attract and retain qualified directors, officers and key employees. We also maintain directors' and officers' liability insurance. The limitation of liability and indemnification provisions in our certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against our directors and officers for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

At present, there is no pending litigation or proceeding involving any of our directors or executive officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, executive officers or persons controlling us, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

TRANSACTIONS WITH CEDAR POINT CAPITAL

Mr. Nigon, a member of our board of directors, is a broker with Cedar Point Capital, LLC, or Cedar Point. Since January 1, 2016, we have (1) paid Cedar Point \$1,654,416 in cash as placement agent commissions in connection with the private placements of an aggregate \$8,431,664 of our common units representing membership interests and an aggregate \$8,337,500 of our unsecured convertible promissory notes, and (2) in connection with such private placements, issued to Cedar Point warrants to purchase an aggregate 4,154,530 of our common units representing membership interests with a weighted average exercise price of \$0.20 per unit, which is approximately 103,864 shares at a weighted-average exercise price of \$7.96 per share on a post-LLC Conversion basis. Mr. Nigon is a Senior Vice President of Cedar Point, but is not a director, executive officer or equity owner of Cedar Point.

SALE OF UNSECURED CONVERTIBLE PROMISSORY NOTES

Since January 1, 2016, Mr. Nigon, a member of our board of directors, and his immediate family members purchased our unsecured convertible promissory notes in the aggregate principal amount of \$775,478. As further described in the section entitled “Description of Capital Stock—Unsecured Convertible Promissory Notes,” these notes will convert into 82,030 shares of common stock in connection with this offering, and Mr. Nigon and his immediately family members will receive warrants to purchase an aggregate of 12,246 shares of our common stock in connection with conversion of such notes.

INDEMNIFICATION AGREEMENTS

We have entered into indemnification agreements with each of our directors and executive officers. The indemnification agreements and our certificate of incorporation and our bylaws require us to indemnify our directors to the fullest extent not prohibited by Delaware law. Subject to certain limitations, our bylaws also require us to advance expenses incurred by our directors and officers. For more information regarding these agreements, see “Executive and Director Compensation—Limitations on Liability and Indemnification Matters.”

INVESTORS’ RIGHTS AGREEMENTS AND MEMBER CONTROL AGREEMENT

We have entered into investors’ rights agreements and a member control agreement with holders of our common units (pre-LLC Conversion), including Mr. Sullivan, Chairman of the Board, Chief Executive Officer, and member of our board of directors; Dr. Laing, our Chief Science Officer, Vice President, Secretary and member of our board of directors; Richard J. Nigon, a member of our board of directors; and Brightstone Venture Capital Fund, LP, an entity whose general partner is Mr. David F. Dalvey, a member of our board of directors.

Under the investors’ rights agreements, these stockholders are entitled to preemptive rights that allow them certain rights to participate when we issue new securities, such as the common stock issued pursuant to this offering. Such rights have been waived in connection with this offering and the investors’ rights agreements will automatically terminate in connection with this offering.

Under the member control agreement, these stockholders are entitled to rights with respect to the registration of their shares following our initial public offering under the Securities Act. These rights were limited in accordance with the member control agreement. For a description of these registration rights, see “Description of Capital Stock—Registration Rights.”

LLC CONVERSION

In connection with this offering, on September 15, 2017, we converted from a Minnesota limited liability company into a Delaware corporation and changed our name from Celcuity LLC to Celcuity Inc., which we refer to herein as the “LLC Conversion.” In conjunction with the LLC Conversion:

- all of our outstanding units were automatically converted into an aggregate of 6,440,139 shares of our common stock, based on the relative ownership interests of our pre-LLC Conversion equityholders;

- we adopted and filed a certificate of incorporation and certificate of conversion with the State of Delaware; and
- we adopted a plan of conversion and adopted and filed articles of conversion with the State of Minnesota.

As a result of the LLC Conversion, we will record income tax expense or benefit in our statements of operations, and a liability or asset for any income tax payable or receivable on our balance sheet.

See “Description of Capital Stock” for additional information regarding a description of our common stock.

POLICIES AND PROCEDURES FOR RELATED PARTY TRANSACTIONS

We have a written related person transactions policy that our executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of our common stock, and any members of the immediate family of and any entity affiliated with any of the foregoing persons, are not permitted to enter into a material related person transaction with us without the review and approval of our audit committee, or a committee composed solely of independent directors in the event it is inappropriate for our audit committee to review such transaction due to a conflict of interest. The policy provides that any request for us to enter into a transaction with an executive officer, director, nominee for election as a director, beneficial owner of more than 5% of our common stock or with any of their immediate family members or affiliates in which the amount involved exceeds \$120,000 will be presented to our audit committee for review, consideration and approval. In approving or rejecting any such proposal, our audit committee will consider the relevant facts and circumstances available and deemed relevant to the audit committee, including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person’s interest in the transaction.

Although we have previously not had a written policy for the review and approval of transactions with related persons, our board of directors has historically reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Prior to approving such a transaction, the material facts as to a director’s or officer’s relationship or interest in the agreement or transaction were disclosed to our board of directors. Our board of directors took this information into account when evaluating the transaction and in determining whether such transaction was fair to the company and in the best interest of all of our stockholders.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of our common stock at September 1, 2017, and as adjusted to reflect the sale of common stock in this offering, for:

- each of our directors;
- each of our named executive officers;
- all of our current directors and executive officers as a group; and
- each person, or group of affiliated persons, who beneficially owned more than 5% of our common stock.

Ownership information provided below assumes no exercise of the underwriter's over-allotment option.

The columns entitled "Shares Beneficially Owned" and "Percentage of Common Stock Beneficially Owned Prior to Offering" are based on 7,322,050 shares of our common stock outstanding as of September 1, 2017, after giving effect to (1) the LLC Conversion and (2) the issuance of 881,911 shares of common stock upon conversion of our unsecured convertible promissory notes as described in the section entitled "Description of Capital Stock—Unsecured Convertible Promissory Notes," based on the initial public offering price of \$9.50 per share. The column entitled "Percentage of Common Stock Beneficially Owned After Offering" is based on 9,722,050 shares of our common stock to be outstanding immediately after this offering, after giving effect to (1) the LLC Conversion, (2) the issuance of 881,911 shares of common stock upon conversion of our unsecured convertible promissory notes as described above, and (3) the sale of 2,400,000 shares of common stock in this offering. The table below does not reflect any shares of common stock that those listed in the table may purchase in this offering.

Beneficial ownership is determined according to the rules of the SEC and generally means that a person has beneficial ownership of a security if he or she possesses sole or shared voting or investment power of that security, including the right to acquire beneficial ownership of that security within 60 days, including through outstanding options and warrants that are exercisable within 60 days of September 1, 2017. Options and warrants to purchase shares of our common stock that are exercisable within 60 days of September 1, 2017 are deemed to be beneficially owned by the persons possessing those rights and are treated as outstanding for the purpose of computing percentage ownership of that person, but are not treated as outstanding for the purpose of computing any other person's ownership percentage. Except as indicated in the footnotes below, each of the beneficial owners named in the table below has, and upon completion of this offering will have, to our knowledge, sole voting and investment power with respect to all shares of common stock listed as beneficially owned by him or her, except for shares owned jointly with that person's spouse. Unless otherwise indicated, the address for each of the stockholders in the table below is Celcuity Inc., 16305 36th Avenue N., Suite 450, Minneapolis, MN 55446.

Name of Beneficial Owner	Shares Beneficially Owned	Percentage of Common Stock Beneficially Owned	
		Prior to Offering ⁽¹⁾	After Offering ⁽²⁾
5% Stockholders			
The Globe Resources Group, LLC ⁽³⁾	680,556	9.3%	7.0%
Directors and Named Executive Officers			
Brian F. Sullivan ⁽⁴⁾	2,777,274	37.8%	28.5%
Lance G. Laing ⁽⁴⁾	1,266,125	17.3%	13.0%
Vicky Hahne	—	—	—
Maureen Cronin	—	—	—
David F. Dalvey ⁽⁵⁾	250,000	3.4%	2.6%
Richard J. Nigon ⁽⁴⁾ ⁽⁶⁾	97,699	1.3%	1.0%
All Directors and Executive Officers as a Group (6 persons) ⁽⁴⁾	4,391,098	59.5%	44.9%

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- (1) Applicable percentage ownership prior to this offering is based on 7,322,050 shares of common stock plus, for each individual, any securities that individual has the right to acquire within 60 days of September 1, 2017.
- (2) Applicable percentage ownership after this offering is based on 9,722,050 shares of common stock plus, for each individual, any securities that individual has the right to acquire within 60 days of September 1, 2017.
- (3) The address of The Globe Resources Group, LLC is 8301 E. 21st Street North, Suite 420, Wichita, KS 67206.
- (4) The beneficial ownership reported in the table includes shares of common stock the beneficial owners have the right to acquire within 60 days of September 1, 2017 upon the exercise of stock options or warrants as follows: Mr. Sullivan, 21,500 shares; Mr. Laing, 16,125 shares; Mr. Nigon, 22,868 shares; and all Directors and Executive Officers as a Group, 60,493 shares.
- (5) Mr. Dalvey's beneficial ownership includes 250,000 shares of common stock owned by Brightstone Venture Capital Fund, LP, of which Mr. Dalvey is the General Partner.
- (6) Mr. Nigon's beneficial ownership includes 20,300 shares of common stock held as trustee of a trust for certain family members. Mr. Nigon disclaims beneficial ownership of such shares.

DESCRIPTION OF CAPITAL STOCK

Our certificate of incorporation authorizes us to issue up to 45,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of undesignated preferred stock, par value \$0.001 per share. The following description summarizes the most important terms of our capital stock. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description, you should refer to our certificate of incorporation and bylaws to be in effect upon the closing of this offering, which are included as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of Delaware law.

Our outstanding unsecured convertible promissory notes (discussed below), will automatically convert into common stock in connection with the completion of this offering, with a conversion price equal to the price per share in this offering. On a pro forma basis as of June 30, 2017, after giving effect to the LLC Conversion and the conversion of outstanding unsecured convertible promissory notes with a conversion price of \$9.50 per share, there were 7,322,050 shares of our common stock issued, held by approximately 112 stockholders of record, and no shares of our preferred stock outstanding. Our board of directors is authorized, without stockholder approval, to issue additional shares of our capital stock.

COMMON STOCK

Voting Rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders.

Dividend Rights

Holders of our common stock are entitled to receive ratably any dividends that our board of directors may declare out of funds legally available for that purpose.

Rights and Preferences

Holders of our common stock will have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock.

Right to Liquidation Distributions

Upon our liquidation, dissolution or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our common stock and any participating preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

UNSECURED CONVERTIBLE PROMISSORY NOTES

In connection with two private placements, we have issued to investors unsecured convertible promissory notes, or Notes, in the aggregate principal amount of \$8,337,500. The Notes carry interest at a rate of 1.25% per annum and the principal and accrued interest will be automatically converted into equity securities upon the closing of a qualified financing, which is an offering of our equity securities from which we receive gross proceeds of at least \$5,000,000 (not including the amount of Notes that are converted upon the closing of such qualified financing). The conversion price of the Notes will be equal to the price at which the equity securities are sold in the qualified financing.

In addition, upon conversion of the Notes, each Note holder will be entitled to receive, in addition to the equity securities issuable upon conversion of the Note, a seven-year warrant to purchase additional equity securities of the same class and series issued upon conversion of the Note. The aggregate warrant exercise price will be equal to 15% of the principal amount of the Note purchased by the Note holder. The exercise price per warrant share will be equal to the conversion price of the Note (i.e., the price at which the equity securities are sold in the qualified financing). The number of warrant shares will be equal to aggregate warrant exercise price divided by the exercise price per warrant share.

This offering will be considered a qualified financing. As such, based on the initial public offering price of \$9.50 per share, the Notes will convert into an aggregate of 881,911 shares of our common stock and our Note holders will receive seven-year warrants to purchase an aggregate of 131,675 shares of our common stock.

PREFERRED STOCK

Our board of directors is authorized, without action by the stockholders, to designate and issue up to an aggregate of 5,000,000 shares of preferred stock in one or more series. Our board of directors is authorized to designate the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions. Our board of directors is able to authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of common stock. The issuance of preferred stock, while providing flexibility in connection with possible future financings and acquisitions and other corporate purposes could, under certain circumstances, have the effect of restricting dividends on our common stock, diluting the voting power of our common stock, impairing the liquidation rights of our common stock, or delaying, deferring or preventing a change in control of the company, which might harm the market price of our common stock. See also “Anti-Takeover and Other Protective Provisions” below.

Our board of directors will make any determination to issue such shares based on its judgment as to the company’s best interests and the best interests of our stockholders. Upon the completion of this offering, we will have no shares of preferred stock outstanding and we have no current plans to issue any shares of preferred stock following completion of this offering.

OPTIONS AND WARRANTS

Options

As of June 30, 2017, on a post-LLC Conversion basis, we had outstanding options to purchase an aggregate of 442,685 shares of our common stock, with a weighted-average exercise price of \$6.78 per share.

Warrants

As of June 30, 2017, on a post-LLC Conversion basis, we had outstanding warrants to purchase an aggregate of 103,864 shares of our common stock, with a weighted-average exercise price of \$7.96 per share. All outstanding warrants have 10-year terms and expire between January 14, 2026 and May 17, 2027.

In addition, in connection with the closing of this offering and the automatic conversion of our Notes, holders of our Notes will be issued seven-year warrants to purchase an aggregate 131,675 shares with a per-share exercise price of \$9.50. See the subsection entitled “Unsecured Convertible Promissory Notes” above. We will also issue a warrant to purchase 120,000 shares of our common stock to the underwriter in connection with the closing of this offering. The number of shares of common stock issuable upon exercise of the warrant will be increased by up to 18,000 shares if the overallotment option is exercised by the underwriter. The underwriter’s warrant will have a five-year term and an exercise price of \$10.45 per share.

REGISTRATION RIGHTS

Piggyback Registration Rights

We have entered into a member control agreement with holders of our common units (pre-LLC Conversion) that provides our equityholders with the right to have their post-LLC Conversion stock registered in connection with the company registering any of its securities under the Securities Act, for its own account or the account of any of its securities holders. The registration rights apply to (1) affiliates, and (2) non-affiliates that hold common units that are not eligible for resale under Rule 144 of the Securities Act. Because all of our non-affiliate equity members hold common units that are eligible for resale under Rule 144, only our affiliates have such registration rights in connection with this offering. On a post-LLC Conversion basis, our affiliates hold 4,276,402 shares of common stock with these piggyback registration rights.

If we register any of our securities for public sale in another offering, holders of registrable securities will have the right to include their shares in the registration statement. This may include non-affiliates if their stock is not then eligible for resale under Rule 144. The registration rights do not apply to any registration on Form S-8 or similar limited-purpose form of registration statement effected solely to implement an employee benefit plan or any registration on Form S-4 or similar limited purpose form of registration statement effected solely to implement an acquisition approved by our equityholders.

The underwriter of any underwritten offering will have the right to limit the number of shares registered by holders if the underwriter determines that marketing factors require limitation, in which case the number of shares to be registered will be apportioned pro rata among the holders of registration rights, according to the total amount of securities entitled to be included by each holder. All piggyback registration rights in connection with this offering have been fully limited in accordance with the member control agreement.

Expenses of Registration Rights

We generally will pay all expenses related to the registrations, other than expenses solely attributed to the registration of the holders' registrable securities, such as underwriting discounts and commissions.

ANTI-TAKEOVER AND OTHER PROTECTIVE PROVISIONS

The provisions of Delaware law and our certificate of incorporation and our bylaws may have the effect of delaying, deferring or discouraging another person from acquiring control of the company. These provisions, which are summarized below, may have the effect of discouraging takeover bids. They are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Delaware Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the date on 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;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (i) shares owned by persons who are directors and also officers and (ii) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66.67% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction or series of transactions together resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Certificate of Incorporation and Bylaw Provisions

- **Board of directors vacancies.** Our bylaws authorize only our board of directors to fill vacant directorships, including newly created seats. In addition, the number of directors constituting our board of directors are permitted to be set only by a resolution adopted by our board of directors. These provisions prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of our board of directors but promotes continuity of management.
- **Advance notice requirements for stockholder proposals and director nominations.** Our bylaws provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our bylaws also specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of the company.
- **No cumulative voting.** The Delaware General Corporation Law provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. Our certificate of incorporation does not provide for cumulative voting.
- **Stockholder action; special meetings of stockholders.** Our certificate of incorporation provides that our stockholders may not take action by written consent, but may only take action at annual or special meetings of our stockholders. As a result, a holder controlling a majority of our capital stock is not able to amend our bylaws or remove directors without holding a meeting of our stockholders called in accordance with our bylaws. Further, our bylaws provide that special meetings of our stockholders may be called only by a majority of our board of directors, the chairperson of our board of directors, or our Chief Executive Officer, thus prohibiting a stockholder from calling a special meeting. These provisions might delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.
- **Issuance of undesignated preferred stock.** We have 5,000,000 shares of undesignated preferred stock. Our board of directors has the authority, without further action by the stockholders, to issue this preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors. The existence of authorized but unissued shares of preferred stock enables our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or other means.
- **Amendment of charter and bylaw provisions.** The affirmative vote of stockholders representing at least two-thirds of the voting power of all then-outstanding capital stock is required to amend, alter or repeal certain provisions of our certificate of incorporation, including the provision noted above regarding stockholders not being able to act by written consent. A majority of our board of directors has authority to adopt, amend or repeal provisions of our bylaws. Stockholders also have the authority to adopt, amend or repeal provisions of our bylaws, but only with the affirmative vote of stockholders representing at least two-thirds of the voting power of all then-outstanding capital stock.

Exclusive Forum

Unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if such court has no jurisdiction, the federal district court for the District of Delaware) shall 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 owed by any of our current or former

directors, officers or other employees to us or our stockholders, (3) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws, (4) any action asserting a claim against us governed by the internal affairs doctrine, or (5) any other action asserting an internal corporate claim, as defined in Section 115 of the Delaware General Corporation Law; in all cases subject to the court having personal jurisdiction over the indispensable parties named as defendants. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees.

TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company. The transfer agent and registrar's address is One State Street Plaza, 30th Floor, New York, NY 10004.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, no public market for our common stock existed, and a liquid trading market for our common stock may not develop or be sustained after this offering. Future sales of substantial amounts of our common stock in the public market, or the anticipation of such sales, could adversely affect prevailing market prices of our common stock from time to time and could impair our future ability to raise equity capital in the future. Furthermore, because only a limited number of shares of our common stock will be available for sale shortly after this offering due to certain contractual and legal restrictions on resale described below, sales of substantial amounts of our common stock in the public market after such restrictions lapse, or the anticipation of such sales, could adversely affect the prevailing market price of our common stock and our ability to raise equity capital in the future.

Upon completion of this offering, we will have outstanding a total of 7,322,050 shares of our common stock (or 9,722,050 shares if the underwriter's option to purchase additional shares is exercised in full), based on our outstanding shares as of June 30, 2017, after giving effect to the LLC Conversion and assuming (1) the issuance of 2,400,000 shares of common stock in this offering (or 2,760,000 shares if the underwriter's option to purchase additional shares is exercised in full); and (2) all principal and accrued interest on our outstanding Notes is converted into 881,911 shares of common stock as described in section entitled "Description of Capital Stock—Unsecured Convertible Promissory Notes." All of the shares sold in this offering (plus any shares sold as a result of the underwriters' exercise of their option) will be freely tradable without restriction or further registration under the Securities Act, unless those shares are purchased by our affiliates as that term is defined in Rule 144 under the Securities Act.

The remaining 7,322,050 shares of common stock to be outstanding after this offering will be "restricted securities" under Rule 144. All of these restricted securities will be subject to transfer restrictions for 180 days from the date of this prospectus pursuant to lock-up agreements. Restricted securities may be sold in the public market only if they have been registered or if they qualify for an exemption from registration under Rules 144 or 701 or otherwise under the Securities Act.

We may issue shares of common stock from time to time as consideration for future acquisitions, investments or other corporate purposes. In the event that any such acquisition, investment or other transaction is significant, the number of shares of common stock that we may issue may in turn be significant. We may also grant registration rights covering those shares of common stock issued in connection with any such acquisition and investment.

RULE 144

In general, under Rule 144 of the Securities Act, as in effect on the date of this prospectus, beginning 90 days after the date of this prospectus any person who is not our affiliate at any time during the preceding three months, and who has beneficially owned their shares for at least six months, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares of our common stock provided current public information about us is available, and, after owning such shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares of our common stock without restriction.

Beginning 90 days after the date of this prospectus, a person who is our affiliate or who was our affiliate at any time during the preceding three months, and who has beneficially owned restricted securities for at least six months, including the holding period of any prior owner other than one of our affiliates, is 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 our common stock then outstanding, which will equal approximately 97,221 shares, based on the number of shares of our common stock outstanding upon completion of this offering (or 100,821 shares if the underwriter exercises its over-allotment option in full); or
- the average weekly trading volume of our common stock on The Nasdaq Capital Market during the four calendar weeks preceding the filing of a Notice of Proposed Sale of Securities pursuant to Rule 144 with respect to the sale.

Sales under Rule 144 by our affiliates are also subject to manner of sale provisions and notice requirements and to the availability of current public information about us.

Upon expiration of the 180-day lock-up period described below, 3,304,629 shares of our common stock will be eligible for sale under Rule 144. We cannot estimate the number of shares of our common stock that our existing stockholders will elect to sell under Rule 144.

RULE 701

Rule 701 generally allows a stockholder who purchased shares of our common stock pursuant to a written compensatory plan or contract and who is not deemed to have been an affiliate of our company during the immediately preceding 90 days to sell these shares in reliance upon Rule 144, but without being required to comply with the public information, holding period, volume limitation or notice provisions of Rule 144. Rule 701 also permits affiliates of our company to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. All holders of Rule 701 shares, however, are required by that rule to wait until 90 days after the date of this prospectus before selling those shares pursuant to Rule 701.

LOCK-UP AGREEMENTS

Our officers, directors, and stockholders have entered into an agreement that, without the prior written consent of the underwriter, they will not, subject to limited exceptions, directly or indirectly sell or dispose of any shares of common stock or any securities convertible into or exchangeable or exercisable for shares of our common stock for a period of 180 days after the date of this prospectus. The lock-up restrictions and specified exceptions are described in more detail under “Underwriting.”

FORM S-8 REGISTRATION STATEMENT

As soon as practicable after the closing of this offering, we intend to file one or more registration statements on Form S-8 under the Securities Act covering all of the shares of our common stock subject to outstanding options and the shares of our common stock reserved for issuance under our current equity incentive plan. However, the shares registered on Form S-8 may be subject to the volume limitations and the manner of sale, notice and public information requirements of Rule 144 and will not be eligible for resale until expiration of the lock-up and market standoff agreements to which they are subject. Of the 442,685 shares of our common stock that were subject to stock options outstanding as of June 30, 2017, options to purchase 166,288 shares of common stock were vested as of June 30, 2017. Shares of our common stock underlying outstanding options will not be eligible for sale until expiration of the 180 day lock-up and market standoff agreements to which they are subject.

REGISTRATION RIGHTS

We have granted piggyback registration rights to certain of our stockholders to sell our common stock. Registration of the sale of these shares under the Securities Act would result in these shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by affiliates. For a further description of these rights, see “Description of Capital Stock—Registration Rights.”

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

This section summarizes the material U.S. federal income tax considerations relating to the acquisition, ownership and disposition of our common stock acquired by “non-U.S. holders” (as defined below) pursuant to this offering. This summary does not provide a complete analysis of all potential U.S. federal income tax considerations relating thereto. The information provided below is based upon provisions of the U.S. Internal Revenue Code of 1986, as amended, or the Code, Treasury regulations promulgated thereunder, administrative rulings and judicial decisions currently in effect. These authorities may change at any time, possibly retroactively, or the Internal Revenue Service, or IRS, might interpret the existing authorities differently. In either case, the tax considerations of owning or disposing of our common stock could differ from those described below. As a result, we cannot assure you that the tax consequences described in this discussion will not be challenged by the IRS or will be sustained by a court if challenged by the IRS.

This summary 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 laws, except to the limited extent provided 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 or other financial institutions;
- partnerships or entities or arrangements treated as partnerships or other pass-through entities for U.S. federal tax purposes (or investors in such entities);
- corporations that accumulate earnings to avoid U.S. federal income tax;
- persons subject to the alternative minimum tax or Medicare contribution tax on net investment income;
- tax-exempt organizations or tax-qualified retirement plans;
- controlled foreign corporations or passive foreign investment companies;
- 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 5% of our capital stock (except to the extent specifically set forth below);
- certain former citizens or former 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, for investment purposes); or
- persons deemed to sell our common stock under the constructive sale provisions of the Code.

In addition, if a partnership or entity classified as a partnership for U.S. federal income tax purposes is a beneficial owner of our common stock, the tax treatment of a partner in the partnership or an owner of the entity will depend upon the status of the partner or other owner and the activities of the partnership or other entity. Accordingly, this summary does not address tax considerations applicable to partnerships that hold our common stock, and partners in such partnerships should consult their tax advisors.

INVESTORS CONSIDERING THE PURCHASE OF OUR COMMON STOCK SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF THE U.S. FEDERAL INCOME AND ESTATE TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE CONSEQUENCES OF FOREIGN, STATE OR LOCAL LAWS, AND TAX TREATIES.

NON-U.S. HOLDER DEFINED

For purposes of this summary, a “non-U.S. holder” is any beneficial owner of our common stock, other than a partnership, that is not:

- an individual who is a citizen or resident of the United States;
- a corporation, or other entity taxable as a corporation for U.S. federal income tax purposes, created or organized under the laws of the United States;
- any state therein or the District of Columbia;
- a trust if it (i) is subject to the primary supervision of a U.S. court and one of more U.S. persons have authority to control all substantial decisions of the trust or (ii) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person; or
- an estate whose income is subject to U.S. income tax regardless of source.

If you are a non-U.S. citizen that is an individual, you may, in many cases, be treated as a resident alien, as opposed to a nonresident alien, by virtue of being present in the United States 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 the current calendar year. For these purposes, all the days present 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 were 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 ownership or disposition of our common stock.

DIVIDENDS

We do not expect to declare or make any distributions on our common stock in the foreseeable future. If we do make distributions on shares of our common stock, however, such distributions 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. Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that is applied against and reduces, but not below zero, a non-U.S. holder’s adjusted tax basis in shares of our common stock. Any remaining excess will be treated as gain realized on the sale or other disposition of our common stock. See “Sale of Common Stock” below.

Any dividend paid to a non-U.S. holder of our common stock that is not effectively connected with the non-U.S. holder’s conduct of a trade or business in the United States will generally be subject to U.S. withholding tax at a 30% rate. The withholding tax might apply at a reduced rate, however, under the terms of an applicable income tax treaty between the United States and the non-U.S. holder’s country of residence. You should consult your tax advisors regarding your entitlement to benefits under a relevant income tax treaty. Generally, in order for us or our paying agent to withhold tax at a lower treaty rate, a non-U.S. holder must certify its entitlement to treaty benefits. A non-U.S. holder generally can meet this certification requirement by providing an IRS Form W-8BEN or Form W-8BEN-E (or any successor of such forms) or appropriate substitute form to us or our paying agent. If the non-U.S. holder holds the stock through a financial institution or other agent acting on the holder’s behalf, the holder will be required to provide appropriate documentation to the agent. The holder’s agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty, you may obtain a refund or credit of any excess amounts withheld by filing an appropriate claim for a refund with the IRS in a timely manner.

Dividends received by a non-U.S. holder that are effectively connected with a U.S. trade or business conducted by the non-U.S. holder, and if required by an applicable income tax treaty between the United States and the non-U.S. holder’s country of residence, are attributable to a permanent establishment maintained by the non-U.S. holder in the United States, are not subject to U.S. withholding tax. To obtain this exemption, a non-U.S. holder must provide us or our paying agent with an IRS Form W-8ECI properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax,

are taxed at the same graduated income tax rates applicable to U.S. persons, net of certain deductions and credits. In addition to being taxed at graduated tax rates, dividends received by corporate non-U.S. holders that are effectively connected with a U.S. trade or business of the corporate non-U.S. holder 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 tax treaty.

SALE OF COMMON STOCK

Subject to the discussions below regarding backup withholding and the Foreign Account Tax Compliance Act, non-U.S. holders will generally not be subject to U.S. federal income tax on any gains realized on the sale, exchange or other disposition of our common stock unless:

- the gain (i) is effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business and (ii) if required by an applicable income tax treaty between the United States and the non-U.S. holder's country of residence, is attributable to a permanent establishment maintained by the non-U.S. holder in the United States (in which case the special rules described below apply);
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of the sale, exchange or other disposition of our common stock, and certain other requirements are met (in which case the gain would be subject to a flat 30% tax, or such reduced rate as may be specified by an applicable income tax treaty, which may be offset by certain U.S. source capital losses, even though the individual is not considered a resident of the United States); or
- the rules of the Foreign Investment in Real Property Tax Act, or FIRPTA, treat the stock as a "U.S. real property interest" as defined in Section 897 of the Code.

The FIRPTA rules may apply to a sale, exchange or other disposition of our common stock if we are, or were within the shorter of the five-year period preceding the disposition and the non-U.S. holder's holding period, a "U.S. real property holding corporation" (as defined in Section 897 of the Code), or USRPHC. In general, we would be a USRPHC if interests in U.S. real estate comprised at least half of the value of our business assets. We do not believe that we are a USRPHC and we do not anticipate becoming one in the future. Even if we become a USRPHC, as long as our common stock is regularly traded on an established securities market, such common stock will be treated as U.S. real property interests only if beneficially owned by a non-U.S. holder that actually or constructively owned more than 5% of our outstanding common stock at sometime within the five-year period preceding the disposition.

If any gain from the sale, exchange or other disposition of our common stock, (1) is effectively connected with a U.S. trade or business conducted by a non-U.S. holder and (2) if required by an applicable income tax treaty between the United States and the non-U.S. holder's country of residence, is attributable to a permanent establishment maintained by such non-U.S. holder in the United States, then the gain generally will be subject to U.S. federal income tax at the same graduated rates applicable to U.S. persons, net of certain deductions and credits. If the non-U.S. holder is a corporation, under certain circumstances, that portion of its earnings and profits that is effectively connected with its U.S. trade or business, subject to certain adjustments, generally would be subject also to a "branch profits tax." The branch profits tax rate is 30% unless reduced by applicable income tax treaty.

U.S. FEDERAL ESTATE TAX

The estates of nonresident alien individuals generally are subject to U.S. federal estate tax on property with a U.S. situs. Because we are a U.S. corporation, our common stock will be U.S. situs property and therefore will be included in the taxable estate of a nonresident alien decedent, unless an applicable estate tax treaty between the United States and the decedent's country of residence provides otherwise.

BACKUP WITHHOLDING AND INFORMATION REPORTING

The Code and the Treasury regulations require those who make specified payments to report the payments to the IRS. Among the specified payments are dividends and proceeds paid by brokers to their customers. The required information returns enable the IRS to determine whether the recipient properly

included the payments in income. This reporting regime is reinforced by “backup withholding” rules. These rules require the payors to withhold tax from payments subject to information reporting if the recipient fails to cooperate with the reporting regime by failing to provide his taxpayer identification number to the payor, furnishing an incorrect identification number, or failing to report interest or dividends on his returns. The backup withholding tax rate is currently 28%. The backup withholding rules do not apply to payments to corporations, whether domestic or foreign, provided they establish such exemption.

Payments to non-U.S. holders of dividends on common stock generally will not be subject to backup withholding, and payments of proceeds made to non-U.S. holders by a broker upon a sale of common stock will not be subject to information reporting or backup withholding, in each case so long as the non-U.S. holder certifies its status as a non-U.S. holder (and we or our paying agent do not have actual knowledge or reason to know the holder is a U.S. person or that the conditions of any other exemption are not, in fact, satisfied) or otherwise establishes an exemption. The certification procedures to claim treaty benefits described under “Dividends” will generally satisfy the certification requirements necessary to avoid the backup withholding tax. We must report annually to the IRS any dividends paid to each non-U.S. holder and the tax withheld, if any, with respect to these dividends. Copies of these reports may be made available to tax authorities in the country where the non-U.S. holder resides.

Under the Treasury regulations, the payment of proceeds from the disposition of shares of our common stock by a non-U.S. holder made to or through a U.S. office of a broker generally will be subject to information reporting and backup withholding unless the beneficial owner certifies, under penalties of perjury, among other things, its status as a non-U.S. holder (and the broker does not have actual knowledge or reason to know the holder is a U.S. person) or otherwise establishes an exemption. The payment of proceeds from the disposition of shares of our common stock by a non-U.S. holder made to or through a non-U.S. office of a broker generally will not be subject to backup withholding and information reporting, except as noted below. Information reporting, but not backup withholding, will apply to a payment of proceeds, even if that payment is made outside of the United States, if you sell our common stock through a non-U.S. office of a broker that is:

- a U.S. person (including a foreign branch or office of such person);
- a “controlled foreign corporation” for U.S. federal income tax purposes;
- a foreign person 50% or more of whose gross income from certain periods is effectively connected with a U.S. trade or business; or
- a foreign partnership if at any time during its tax year (a) one or more of its partners are U.S. persons who, in the aggregate, hold more than 50% of the income or capital interests of the partnership or (b) the foreign partnership is engaged in a U.S. trade or business, unless the broker has documentary evidence that the beneficial owner is a non-U.S. holder and certain other conditions are satisfied, or the beneficial owner otherwise establishes an exemption (and the broker has no actual knowledge or reason to know to the contrary).

Backup withholding is not an additional tax. Any amounts withheld from a payment to a holder of common stock under the backup withholding rules can be credited against any U.S. federal income tax liability of the holder and may entitle the holder to a refund, provided that the required information is furnished to the IRS in a timely manner.

FOREIGN ACCOUNT TAX COMPLIANCE ACT

A U.S. federal withholding tax of 30% may apply to dividends and the gross proceeds of a disposition of our common stock paid to a foreign financial institution (as specifically defined by the applicable rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equityholders of such institution, as well as certain account holders that are foreign entities with U.S. owners). This U.S. federal withholding tax of 30% will also apply to dividends and the gross proceeds of a disposition of our common stock paid to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding direct and

indirect U.S. owners of the entity. The 30% federal withholding tax described in this paragraph cannot be reduced under an income tax treaty with the United States or by providing an IRS Form W-8BEN or similar documentation. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules and certifies as such on a Form W-8BEN-E (or any successor of such form). Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. Holders should consult with their own tax advisors regarding the possible implications of the withholding described herein.

The withholding provisions described above generally apply to proceeds from a sale or other disposition of common stock if such sale or other disposition occurs on or after January 1, 2019 and to payments of dividends on our common stock.

THE PRECEDING DISCUSSION OF U.S. FEDERAL TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY. IT IS NOT TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE PARTICULAR U.S. FEDERAL, STATE, LOCAL AND FOREIGN TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.

UNDERWRITING

The underwriter named below has agreed to buy, subject to the terms of the underwriting agreement, the number of shares of common stock listed opposite its name below. The underwriter is committed to purchase and pay for all of the shares if any are purchased, other than those shares covered by the over-allotment option described below. Craig-Hallum Capital Group LLC is the sole book-running manager for the offering.

Underwriter	Number of Shares
Craig-Hallum Capital Group LLC	2,400,000
Total	<u>2,400,000</u>

The underwriter has advised us that it proposes to offer the shares of common stock to the public at a price of \$9.50 per share. The underwriter proposes to offer the shares of common stock to certain dealers at the same price less a concession of not more than \$0.399 per share. After the offering, these figures may be changed by the underwriter.

The shares sold in this offering are expected to be ready for delivery against payment in immediately available funds on or about September 22, 2017, subject to customary closing conditions. The underwriter may reject all or part of any order.

We have granted to the underwriter an option to purchase up to an additional 360,000 shares of common stock from us at the same price to the public, and with the same underwriting discount, as set forth in the table below. The underwriter may exercise this option any time during the 30-day period after the date of this prospectus, but only to cover over-allotments, if any. To the extent the underwriter exercises the option, the underwriter will become obligated, subject to certain conditions, to purchase the shares for which it exercises the option.

COMMISSIONS AND DISCOUNTS

The table below summarizes the underwriting discounts that we will pay to the underwriter. These amounts are shown assuming both no exercise and full exercise of the over-allotment option. In addition to the underwriting discount, we have agreed to pay up to \$275,000 of the fees and expenses of the underwriter, which may include the fees and expenses of counsel to the underwriter. In connection with the successful completion of this offering, for the price of \$50, the underwriter may purchase a warrant to purchase shares of our common stock equal to 5.0% of the shares sold in this offering at an exercise price of \$10.45 per share; *provided* that the underwriter will only receive such warrants relating to the over-allotment option upon the closing (if any) of the over-allotment option. The warrants are exercisable during the period commencing on the date of the prospectus and ending five years from the date of this prospectus. The warrants may not be sold during this offering, or sold, transferred, assigned, pledged or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the warrants, or the shares acquirable upon exercise thereof, by any person for a period of 180 days immediately following the effective date of this registration statement, except as provided in paragraph (g)(2) of Rule 5110 of FINRA.

Except as disclosed in this prospectus, the underwriter has not received and will not receive from us any other item of compensation or expense in connection with this offering considered by FINRA to be underwriting compensation under FINRA Rule 5110. The underwriting discount was determined through an arms' length negotiation between us and the underwriter.

	Per Share	Total with No Over-Allotment	Total with Over-Allotment
Underwriting discount to be paid by us	\$0.665	\$1,596,000	\$1,835,400

We estimate that the total expenses of this offering, excluding underwriting discounts, will be approximately \$1,100,000. This includes \$275,000 of fees and expenses of the underwriter. These expenses are payable by us.

INDEMNIFICATION

We also have agreed to indemnify the underwriter against certain liabilities, including civil liabilities under the Securities Act of 1933, as amended, or to contribute to payments that the underwriter may be required to make in respect of those liabilities.

NO SALES OF COMMON STOCK

We, each of our directors and officers and certain of our significant stockholders have agreed not to offer, sell, agree to sell, directly or indirectly, or otherwise dispose of any shares of common stock or any securities convertible into or exchangeable for shares of common stock without the prior written consent of the underwriter for a period of 180 days after the date of this prospectus. These lock-up agreements provide limited exceptions and their restrictions may be waived at any time by the underwriter.

DETERMINATION OF OFFERING PRICE

The underwriter has advised us that it proposes to offer the shares directly to the public at the initial public offering price set forth on the cover page of this prospectus. The initial public offering price is subject to change as a result of market conditions and other factors. Prior to this offering, no public market existed for our common stock. The initial public offering price of the shares was determined by negotiation between us and the underwriter. The principal factors considered in determining the initial public offering price of the shares included:

- the information in this prospectus and otherwise available to the underwriter, including our financial information;
- the history and the prospects for the industry in which we compete;
- the ability and experience of our management;
- the prospects for our future earnings;
- the present state of our development and our current financial condition;
- the general condition of the economy and the securities markets in the United States at the time of this initial public offering;
- the recent market prices of, and the demand for, publicly-traded securities of generally comparable companies; and
- other factors as were deemed relevant.

We cannot be sure that the initial public offering price will correspond to the price at which the shares of common stock will trade in the public market following this offering or that an active trading market for the shares of common stock will develop or continue after this offering.

PRICE STABILIZATION, SHORT POSITIONS AND PENALTY BIDS

To facilitate this offering, the underwriter may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock during and after the offering. Specifically, the underwriter may create a short position in our common stock for its own accounts by selling more shares of common stock than we have sold to the underwriter. The underwriter may close out any short position by purchasing shares in the open market.

In addition, the underwriter may stabilize or maintain the price of our common stock by bidding for or purchasing shares in the open market and may impose penalty bids. If penalty bids are imposed, selling concessions allowed to broker-dealers participating in this offering are reclaimed if shares previously distributed in this offering are repurchased, whether in connection with stabilization transactions or otherwise. The effect of these transactions may be to stabilize or maintain the market price of our common stock at a level above that which might otherwise prevail in the open market. The imposition of a penalty

bid may also affect the price of our common stock to the extent that it discourages resales of our common stock. The magnitude or effect of any stabilization or other transactions is uncertain. These transactions may be effected on The Nasdaq Capital Market or otherwise and, if commenced, may be discontinued at any time.

In connection with this offering, the underwriter and selling group members may also engage in passive market making transactions in our common stock on The Nasdaq Capital Market. Passive market making consists of displaying bids on The Nasdaq Capital Market limited by the prices of independent market makers and effecting purchases limited by those prices in response to order flow. Rule 103 of Regulation M promulgated by the Securities and Exchange Commission limits the amount of net purchases that each passive market maker may make and the displayed size of each bid. Passive market making may stabilize the market price of our common stock at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Neither we nor the underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor the underwriter make any representation that the underwriter will engage in these transactions or that any transaction, if commenced, will not be discontinued without notice.

ELECTRONIC OFFER, SALE AND DISTRIBUTION OF SHARES

The underwriter or syndicate members may facilitate the marketing of this offering online directly or through one of their respective affiliates. In those cases, prospective investors may view offering terms and a prospectus online and place orders online or through their financial advisors. Such websites and the information contained on such websites, or connected to such sites, are not incorporated into and are not a part of this prospectus.

OTHER RELATIONSHIPS

The underwriter and its affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriter has in the past, and may in the future, engage in investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. The underwriter has in the past, and may in the future, receive customary fees and commissions for these transactions.

In the ordinary course of their various business activities, the underwriter and its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the issuer. The underwriter and its affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that it acquires, long and/or short positions in such securities and instruments.

LISTING

In connection with this offering, we have our common stock listed on The Nasdaq Capital Market under the symbol “CELC.”

TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company.

SELLING RESTRICTIONS

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or

subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31 103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

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

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

European Economic Area

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

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

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase any shares of our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

The underwriter has represented and agreed that:

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

Switzerland

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

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

Australia

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

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

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

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

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

LEGAL MATTERS

The validity of the shares of our common stock to be issued in this offering will be passed upon for us by our counsel, Fredrikson & Byron, P.A., Minneapolis, Minnesota. Certain legal matters relating to this offering will be passed upon for the underwriter by Faegre Baker Daniels LLP, Minneapolis, Minnesota.

EXPERTS

The financial statements as of and for the twelve months ended December 31, 2015 and December 31, 2016 included in this prospectus have been audited by Boulay PLLP, our independent registered public accounting firm, and have been included herein in reliance upon the report of such firm given upon their authority 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 shares of our common stock offered by this prospectus. This prospectus, which constitutes part of that registration statement, does not contain all of the information set forth in the registration statement or the accompanying exhibits and schedules. Some items included in the registration statement are omitted from this prospectus in accordance with the rules and regulations of the SEC. For further information with respect to us and the common stock offered in this prospectus, we refer you to the registration statement and the accompanying exhibits and schedules. Statements contained in this prospectus regarding the contents of any contract, agreement or any other document are summaries of the material terms of these contracts, agreements or other documents. With respect to each of these contracts, agreements or other documents filed as an exhibit to the registration statement, reference is made to such exhibit for a more complete description of the matter involved.

A copy of the registration statement and the accompanying exhibits and schedules and any other document we file may be inspected without charge and copied at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the SEC's website is <http://www.sec.gov>.

In connection with this offering we have registered our common stock with the SEC under Section 12 of the Exchange Act and have become subject to the information and periodic reporting requirements of the Exchange Act, and we will file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above. We maintain a website at <http://www.celcuity.com>. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports, proxy statements and other information filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of this prospectus.

Celcuity LLC

INDEX TO FINANCIAL STATEMENTS

The following financial statements are included in this prospectus.

For the years ended December 31, 2016 and December 31, 2015:

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Governors and
Members of Celcuity LLC:

We have audited the accompanying balance sheets of Celcuity LLC as of December 31, 2016 and 2015, and the related statements of operations, changes in stockholders' equity, and cash flows for each of the years in the two-year period ended December 31, 2016. Celcuity LLC's management is responsible for these financial statements. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, 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. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Celcuity LLC as of December 31, 2016 and 2015, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Notes 5 and 8 to the financial statements, on August 23, 2017 Celcuity LLC filed a Registration Statement on Form S-1 that anticipates Celcuity LLC converting to Celcuity Inc. upon an initial public offering. The financial statements have been retrospectively adjusted to the converted stockholders' equity of Celcuity Inc., as this transaction is accounted for as a change in the capital structure of Celcuity LLC.

/s/ Boulay PLLP

Minneapolis, Minnesota
June 9, 2017, except for Notes 5 and 8
which are as of August 31, 2017

Celcuity LLC
Balance Sheets
December 31, 2016 and 2015

	2016	2015
Assets		
Current Assets:		
Cash and cash equivalents	\$ 5,856,348	\$ 5,067,240
Restricted cash	50,000	50,000
Deposits	5,717	5,717
Total current assets	5,912,065	5,122,957
Property and equipment, net	144,912	177,068
Total Assets	<u>\$ 6,056,977</u>	<u>\$ 5,300,025</u>
Liabilities and Stockholders' Equity		
Current Liabilities:		
Accounts payable	\$ 331,534	\$ 261,755
Accrued expenses	113,825	21,849
Total current liabilities	445,359	283,604
Total Liabilities	445,359	283,604
Commitments and contingencies		
Stockholders' Equity:		
Common Stock, 45,000,000 shares authorized, 6,440,105 and 5,891,147 shares issued and outstanding as of December 31, 2016 and December 31, 2015, respectively, par value \$0.001	6,440	5,891
Additional paid-in capital	13,936,579	10,031,523
Accumulated deficit	(8,331,401)	(5,020,993)
Total Stockholders' Equity	5,611,618	5,016,421
Total Liabilities and Stockholders' Equity	<u>\$ 6,056,977</u>	<u>\$ 5,300,025</u>

See accompanying notes to the financial statements

Celcuity LLC
Statements of Operations
For the Years Ended December 31, 2016 and 2015

	2016	2015
Operating expenses:		
Research and development	\$ 3,064,762	\$ 2,011,719
General and administrative	263,664	250,091
Total operating expenses	3,328,426	2,261,810
Loss from operations	(3,328,426)	(2,261,810)
Interest income	18,018	268
Net loss	<u>\$(3,310,408)</u>	<u>\$(2,261,542)</u>
Net loss per share, basic and diluted	\$ (0.52)	\$ (0.39)
Weighted average common shares outstanding, basic and diluted	6,313,089	5,843,317

See accompanying notes to the financial statements

Celcuity LLC

Statements of Changes in Stockholders' Equity for the Years Ended December 31, 2016 and 2015

	Common Stock		Additional Paid-In Capital	Member Note Receivable	Accumulated Deficit	Total Stockholders' Equity
	Shares	Par Amount				
Balance at December 31, 2014	5,325,218	\$5,325	\$ 6,173,188	\$(1,000,000)	\$(2,759,451)	\$ 2,419,062
Common stock issued, net	565,929	566	3,801,828	—	—	3,802,394
Stock-based compensation	—	—	56,507	—	—	56,507
Proceeds from payment of Member note for shares purchased	—	—	—	1,000,000	—	1,000,000
Net loss	—	—	—	—	(2,261,542)	(2,261,542)
Balance at December 31, 2015	5,891,147	5,891	10,031,523	—	(5,020,993)	5,016,421
Common stock issued, net	548,958	549	3,717,750	—	—	3,718,299
Stock-based compensation	—	—	187,306	—	—	187,306
Net loss	—	—	—	—	(3,310,408)	(3,310,408)
Balance at December 31, 2016	<u>6,440,105</u>	<u>\$6,440</u>	<u>\$13,936,579</u>	<u>\$ —</u>	<u>\$(8,331,401)</u>	<u>\$ 5,611,618</u>

See accompanying notes to the financial statements

Celcuity LLC
Statements of Cash Flows
For the Years Ended December 31, 2016 and 2015

	2016	2015
Cash flows from operating activities:		
Net loss	\$(3,310,408)	\$(2,261,542)
Adjustments to reconcile net loss to net cash used by operations:		
Depreciation	73,059	58,376
Stock-based compensation	187,306	56,507
Changes in operating assets and liabilities:		
Accounts payable	69,779	157,469
Accrued expenses	91,976	10,410
Net cash used by operating activities	<u>(2,888,288)</u>	<u>(1,978,780)</u>
Cash flows from investing activities:		
Purchases of property and equipment	(40,903)	(78,982)
Net cash used by investing activities:	<u>(40,903)</u>	<u>(78,982)</u>
Proceeds from sale of common stock, net of issuance costs	3,718,299	3,802,394
Proceeds from member note receivable for equity sold in 2014	—	1,000,000
Net cash provided by financing activities	<u>3,718,299</u>	<u>4,802,394</u>
Net increase in cash	789,108	2,744,632
Cash and cash equivalents at beginning of year	5,067,240	2,322,608
Cash and cash equivalents at end of year	<u>\$ 5,856,348</u>	<u>\$ 5,067,240</u>

See accompanying notes to the financial statements

Celcuity LLC
Notes to Financial Statements
December 31, 2016 and December 31, 2015

1. Summary of Significant Accounting Policies

Nature of Business

Celcuity LLC, a Minnesota limited liability company (the “Company”), is a cellular analysis company that is discovering new cancer sub-types and commercializing diagnostic tests designed to significantly improve the response rates of cancer patients treated with targeted therapies. The Company’s proprietary CELx diagnostic platform is currently the only commercially available technology the Company is aware of to use a patient’s living tumor cells to evaluate the functional status of the cell signaling pathways associated with cancer. The CELx platform identifies the abnormal signaling activity driving a patient’s cancer and quantifies how effectively a targeted therapy can treat it. This enables physicians to select the therapeutic that precisely matches and inhibits a patient’s cellular dysfunction, which significantly increases the likelihood of a positive clinical outcome. The Company’s first analytically validated and commercially ready CELx test diagnoses two new sub-types of HER2-negative breast cancer. In late-2017, the Company will be fielding a prospective clinical trial to evaluate the efficacy of HER2 targeted therapies in patients with these newly identified cancer sub-types. In addition to the CELx tests for HER2-negative breast cancer, the Company is developing CELx tests to diagnose 14 new potential cancer sub-types in breast, lung, colon, ovarian, kidney, bladder and hematological cancers. The Company expects to launch these additional tests on a staggered basis over the next few years. The Company was cofounded in 2012 by Brian Sullivan and Lance Laing and is currently based in Minnesota. The Company has not generated any revenues to date.

Accounting Estimates

Management uses estimates and assumptions in preparing these financial statements in accordance with accounting principles generally accepted in the United States of America. Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported revenues and expenses. Actual results could differ from those estimates. Significant items subject to such estimates and assumptions include the useful lives of fixed assets and the valuation of stock-based compensation.

Cash and Cash Equivalents

The Company maintains its accounts primarily at one financial institution. At times throughout the year the Company’s cash balances may exceed amounts insured by the Federal Deposit Insurance Corporation. At December 31, 2016 and 2015, the Company had \$5,842,193 and \$0, respectively, in money market funds that are considered cash equivalents.

Property and Equipment

Property and equipment are stated at cost. Depreciation is provided over estimated useful lives by the use of the straight-line method. Maintenance and repairs are expensed as incurred; major improvements and betterments are capitalized.

Estimated useful lives of property and equipment are as follows for the major classes of assets:

Asset Description	Estimated Lives
Furniture and Equipment	4
Leasehold Improvements	2-3

Long-Lived Assets

Long-lived assets, such as property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group be tested for possible impairment, the Company first compares undiscounted cash flows expected to be generated by that asset or asset group to its carrying

Celcuity LLC
Notes to Financial Statements
December 31, 2016 and December 31, 2015

1. Summary of Significant Accounting Policies (Continued)

value. If the carrying value of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying value exceeds its fair value. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values, and third party independent appraisals, as considered necessary.

Deferred Transaction Costs

Deferred transaction costs primarily consist of direct incremental legal, accounting, and other fees relating to the Company's contemplated initial public offering ("IPO"), and are capitalized as incurred. The deferred transaction costs will be offset against IPO proceeds upon the consummation of the offering. In the event the IPO is terminated, which would include a postponement of 90 days or greater, any deferred transaction costs will be expensed.

Comprehensive Loss

Comprehensive loss includes net loss as well as other changes in stockholders' equity that result from transactions and economic events other than those with stockholders. For all periods presented, there was no difference between net loss and comprehensive loss.

Risks and Uncertainties

The Company is subject to risks common to companies in the development stage including, but not limited to, dependency on the clinical and commercial success of its diagnostic tests, ability to obtain regulatory approval of its diagnostic tests, the need for substantial additional financing to achieve its goals, uncertainty of broad adoption of its approved products, if any, by physicians and consumers, and significant competition.

Fair Value of Financial Instruments

The Company's accounting for fair value measurements of assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring or nonrecurring basis adheres to the Financial Accounting Standards Board ("FASB") 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 measurements involving significant unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1 Inputs: Unadjusted quoted prices in active markets for identical assets or liabilities accessible to the Company at the measurement date.
- Level 2 Inputs: Other than quoted prices included in Level 1 inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.
- Level 3 Inputs: Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at measurement date.

The level in the fair value hierarchy within which a fair measurement in its entirety falls is based on the lowest level input that is significant to the fair value measurement in its entirety.

The carrying values of restricted cash, accounts payable, accrued expenses and other financial working capital items approximate fair value at December 31, 2016 and 2015, due to the short maturity nature of these items.

Celcuity LLC
Notes to Financial Statements
December 31, 2016 and December 31, 2015

1. Summary of Significant Accounting Policies (Continued)

Income Taxes

Celcuity is a LLC and as such it is a disregarded legal entity for income tax purposes. Accordingly, no provision or benefit for income taxes was included in the financial statements for the years ended December 31, 2016 and 2015.

Primarily due to the Company's tax status, the Company does not have any significant tax uncertainties that would require recognition or disclosure. For years before 2013, the Company is no longer subject to U.S. federal or state income tax examination. The Company's policy is to recognize interest and penalties related to uncertain tax positions as a component of general and administrative expenses. As of December 31, 2016 and December 31, 2015, the Company did not have any significant uncertain tax positions.

Stock-Based Compensation

The Company's stock-based compensation consists of common stock options issued to certain employees and nonemployees of the Company. The Company recognizes compensation expense for employees based on an estimated grant date fair value using the Black-Scholes option-pricing method.

The fair value of options granted to nonemployees is determined using the fair value of the service provided or the fair value of the option granted, whichever is more reliable. The fair value is measured at the value of the Company's common stock at the earlier of the date that the commitment for performance by the counterparty has been reached or the counterparty's performance is complete. Awards granted to nonemployees are remeasured to fair value at each period end date until vested and expensed on a straight-line basis over the vesting period.

Research and Development

Research and development costs are expensed as incurred. Research and development costs amounted to \$3,064,762 in 2016 and \$2,011,719 in 2015, respectively.

Segment Data

The Company manages its operations as a single segment for the purposes of assessing performance and making operating decisions.

Application of New or Revised Accounting Standards

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

Recently Adopted Accounting Pronouncements

In August 2014, FASB issued Accounting Standards Update No 2014-15, "*Presentation of Financial Statements—Going Concern: Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern.*" The standard defines management's going concern assessment and disclosure responsibilities. The Company has adopted this standard as of January 1, 2016 and determined that it has the necessary capital, based on current cash on hand and the convertible note offering closed in May 2017, to meet all its obligations for at least one year from the issuance of these financial statements.

Celcuity LLC
Notes to Financial Statements
December 31, 2016 and December 31, 2015

1. Summary of Significant Accounting Policies (Continued)

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, which provides guidance for accounting for leases. The new guidance requires companies to recognize the assets and liabilities for the rights and obligations created by leased assets, initially measured at the present value of the lease payments. The accounting guidance for lessors is largely unchanged. The ASU is effective for annual and interim periods beginning after December 15, 2018 for public entities and December 15, 2019 for all other entities, with early adoption permitted. It is to be adopted using a modified retrospective approach. The Company is currently evaluating the impact that the adoption of this guidance will have on the Company's financial statements.

In May 2014 and amended in August 2015, the FASB issued ASU No. 2014-09 which amended the *Revenue from Contracts with Customers (Topic 606)* of the Accounting Standards Codification. The core principle of the new guidance is that an entity should recognize revenue to reflect the transfer of goods and services to customers in an amount equal to the consideration the entity receives or expects to receive. The ASU is effective for annual and interim periods beginning after December 15, 2017 for public entities and December 15, 2018 for all other entities, with early adoption permitted. The Company is currently evaluating the impact that the adoption of this guidance will have on the Company's financial statements.

2. Net Loss per Common Share

Basic and diluted net loss per common share is determined by dividing net loss attributable to common stockholders by the weighted-average common shares outstanding during the period. For all periods presented, the common shares underlying the options have been excluded from the calculation because their effect would be anti-dilutive. Therefore, the weighted-average shares outstanding used to calculate both basic and diluted loss per common shares are the same.

For the years ended December 31, 2016 and 2015, 55,283 and 32,142 option and warrant share equivalents, respectively, have been excluded from the computations of diluted weighted-average shares outstanding as they would be anti-dilutive.

3. Property and Equipment

Property and equipment consists of the following at December 31:

	2016	2015
Leasehold improvements	\$ 22,307	\$ 22,307
Furniture and equipment	278,020	237,117
	<u>300,327</u>	<u>259,424</u>
Less: Accumulated depreciation	(155,415)	(82,356)
Totals	<u>\$ 144,912</u>	<u>\$177,068</u>

Depreciation expense was \$73,059 and \$58,376 for the periods ending December 31, 2016 and December 31, 2015, respectively.

4. Lease Obligations

The Company leases its corporate space in Minneapolis, Minnesota. At December 31, 2016, the Company had the following minimum commitments for payment of rentals which at inception had a non-cancellable term of more than one year:

Celcuity LLC
Notes to Financial Statements
December 31, 2016 and December 31, 2015

4. Lease Obligations (Continued)

	Operating Lease
2017	\$51,445
2018	\$21,982

Rent expense for operating leases was approximately \$49,600 and \$49,600 for 2016 and 2015, respectively. In connection with the corporate lease, the Company is required to maintain a \$50,000 standby letter of credit. The standby letter of credit expires on July 31, 2018.

5. Members' Units to be Converted to Common Stock in Connection with IPO

On August 23, 2017, the Company filed a Registration Statement on Form S-1 with the United States Securities and Exchange Commission (the "SEC") for its contemplated IPO. Immediately prior to the effectiveness of the Registration Statement, the Company intends to convert from a Minnesota limited liability company to a Delaware corporation, and pursuant to such conversion, the Company will be renamed Celcuity Inc. and all of the Company's outstanding member units will convert into common stock of Celcuity Inc. at a ratio of 40 member units for each share of common stock (the "LLC Conversion").

The Company has determined that the LLC Conversion is equivalent to a change in the Company's capital structure and has retrospectively adjusted the financial statements to present the conversion of member units to common stock of the successor entity. As a result of the proposed change in the capital structure, the following changes have been adjusted in these financial statements: (i) every 40 member units have been converted to one share of common stock, and (ii) the number of member units underlying each member unit option or member unit warrant have been proportionately decreased by the same ratio as the LLC Conversion and relabeled as stock options and warrants, and the exercise price of each outstanding member unit option and warrant has been proportionately increased so that the aggregate exercise price payable upon exercise shall remain unchanged. Accordingly, all option numbers, share numbers, warrant numbers, share prices, warrant prices, exercise prices and losses per share have been adjusted within these financial statements, on a retrospective basis to reflect the LLC Conversion.

Member Units

As of December 31, 2016 and 2015, the Company had 257,604,208 and 235,645,866 member units issued and outstanding, respectively. The Company has one class of member unit and there is no limitation on the number of units that may be issued by the Company. Each member has one vote for each unit owned. After giving effect to the proposed LLC Conversion on a retrospective basis, the number of common shares outstanding as of December 31, 2016 and 2015 was 6,440,105 and 5,891,147, respectively.

The number of common shares outstanding as of December 31, 2015 and 2016 includes the sale of common shares through two private placements. During 2015, the Company raised \$3,802,394, net of offering costs of \$477,606, through the sale of 565,929 common shares. During 2016, the Company raised \$3,718,294, net of offering costs of \$764,254, through the sale of 548,958 common shares. Included with the offering costs is \$330,607 related to the fair value of common stock warrants issued to the placement agent. The per share offering price for both private placements was \$7.56.

Warrants

In connection with the 2016 private placement, the Company issued ten-year warrants to purchase common stock to the placement agent. The warrants allow the holders to purchase up to 55,249 common shares at \$7.56 per share. The warrants are immediately exercisable and expire on January 14, 2026. These warrants are equity classified and the fair value of \$330,607 is reflected as additional paid-in capital.

Celcuity LLC
Notes to Financial Statements
December 31, 2016 and December 31, 2015

6. Stock-Based Compensation

The 2012 Equity Incentive Plan was adopted by the Company's board and approved by the members of the company on August 10, 2012, and was subsequently amended on November 12, 2012. The Company reserved a maximum of 625,000 common shares available for issuance under the 2012 Equity Incentive Plan, of which 302,088 common shares were outstanding as of December 31, 2016. The 2012 Equity Incentive Plan provides for share options, restricted share awards, performance share awards or share bonuses. The exercise price of each share option granted under our 2012 Equity Incentive Plan is not less than one hundred percent (100%) of the fair Market value of one share on the date of grant. The maximum permitted term of options granted under our 2012 Equity Incentive Plan is ten years. The Company's board has administered the plan and determined the provisions of incentive awards, including eligible recipients, number of shares subject to an incentive award, exercise price, vesting schedule, duration of an incentive award and other restrictions an incentive award may be subject to.

The Black-Scholes option-pricing model was used to estimate the fair value of equity-based awards with the following weighted-average assumptions at December 31:

	2016	2015
Risk-free interest rate	2.00%	1.98%
Expected volatility	75.0%	72.0%
Expected life (years)	6.25 to 10.00	6.25 to 10.00
Expected dividend yield	0%	0%

The inputs for the Black-Scholes valuation model require management's significant assumptions. The common share price was determined by the Company's board based on recent prices of common shares sold in private offerings. The risk-free interest rates were based on the rate for U.S. Treasury securities at the date of grant with maturity dates approximately equal to the expected life at the grant date. The expected life was based on the simplified method in accordance with the SEC Staff Accounting Bulletin Nos. 107 and 110 as the Company's shares are not publicly traded. The expected volatility was estimated based on historical volatility information of peer companies that are publicly available.

All assumptions used to calculate the grant date fair value of nonemployee options are generally consistent with the assumptions used for options granted to employees, except the expected life is equal to the contractual term. In the event the Company terminates any of its consulting agreements, the unvested options underlying the agreements would also be cancelled. Unvested nonemployee options are marked-to-market at each reporting period.

Celcuity LLC
Notes to Financial Statements
December 31, 2016 and December 31, 2015

6. Stock-Based Compensation (Continued)

The following table summarizes the activity for all stock options outstanding at December 31 under the Plan:

	2016		2015	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Options outstanding at beginning of year	114,525	\$3.07	62,500	\$2.59
Granted	190,063	\$7.60	52,025	\$3.64
Exercised	—	\$ —	—	\$ —
Expired	—	\$ —	—	\$ —
Forfeited	(2,500)	\$3.60	—	\$ —
Balance at end of year	302,088	\$5.91	114,525	\$3.07
Options exercisable at December 31:	<u>71,463</u>	<u>\$2.91</u>	<u>31,317</u>	<u>\$2.47</u>
Weighted Average Grant Date Fair Value for Options Granted During:		\$5.22		\$2.47

The following table summarizes additional information about stock options outstanding and exercisable at December 31, 2016 under the Plan:

Options Outstanding				Options Exercisable		
Options Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Aggregate Intrinsic Value	Options Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic Value
302,088	8.80	\$5.91	\$497,862	71,463	\$2.91	\$332,692

The Company recognized stock-based compensation expense of \$187,307 and \$56,507 for 2016 and 2015, respectively. Total unrecognized compensation cost related to stock options is estimated to be recognized as follows:

2017	\$364,753
2018	253,316
2019	225,875
2020	110,833
Total estimated compensation cost to be recognized	<u><u>\$954,777</u></u>

7. Retirement Savings Plan

Substantially all of the Company's employees are eligible to participate in a qualified defined contribution 401(k) plan. Participants may elect to have a specified portion of their salary contributed to the plan, and the Company may make discretionary contributions to the plan. The Company did not make any contributions to the plan for 2016 or 2015.

Celcuity LLC
Notes to Financial Statements
December 31, 2016 and December 31, 2015

8. Subsequent Events

In May 2017, the Company issued to investors unsecured convertible promissory notes, or Notes, in the aggregate principal amount of \$8,337,500. The Notes carry interest at a rate of 1.25% per annum. The Notes will convert into: (i) equity securities upon the closing of a qualified equity financing in which the Company receives gross proceeds of at least \$5,000,000, with such equity securities being of the same class and series of those sold in such financing, or (ii) common units if a qualified equity financing has not occurred before December 31, 2018. Upon conversion of the Notes, holders of the Notes will also receive a warrant to purchase additional equity securities of the same class and series issued upon conversion of the Notes. The conversion price of the Notes will be equal to the price at which the equity securities are sold in the qualified equity financing, or if no qualified equity financing occurs prior to December 31, 2018, the conversion price will be \$8.42 per share.

In May 2017, the Company entered into an agreement with a clinical research organization to conduct a clinical research study. The Company is obligated to make a payment of \$300,000 in June 2017 and to make additional payments of \$50,000, \$200,000, \$50,000 in 2017, 2018, and 2019, respectively. Additional payments will be due as patients are enrolled in the study. The maximum amount of these additional payments is estimated to be approximately \$2,100,000 over the course of the Agreement.

On August 23, 2017, the Company filed a Registration Statement on Form S-1 with the SEC for its contemplated IPO. Immediately prior to the effectiveness of the Registration Statement, the Company intends to effect a LLC conversion, which it has determined to be a change in capital structure and has retrospectively adjusted the financial statements to reflect the intended LLC Conversion (Note 5).

The Company has evaluated subsequent events through June 9, 2017, the date which the financial statements were available to be issued.

For the reissuance of these financial statements, the Company has evaluated subsequent events through August 31, 2017.

Celcuity LLC
Condensed Balance Sheets
June 30, 2017 and December 31, 2016

	June 30, 2017 (unaudited)	December 31, 2016
Assets		
Current Assets:		
Cash and cash equivalents	\$ 10,908,068	\$ 5,856,348
Restricted cash	50,000	50,000
Deposits	5,717	5,717
Deferred transaction costs	301,730	—
Prepaid assets	156,120	—
Total current assets	11,421,635	5,912,065
Property and equipment, net	265,315	144,912
Total Assets	<u>\$ 11,686,950</u>	<u>\$ 6,056,977</u>
Liabilities and Stockholders' Equity:		
Current Liabilities:		
Accounts payable	\$ 519,867	\$ 331,534
Accrued expenses	257,087	113,825
Total current liabilities	776,954	445,359
Long term liabilities	6,575,413	—
Commitments and contingencies		
Stockholders' Equity:		
Common Stock, 45,000,000 shares authorized, 6,440,105 shares issued and outstanding as of June 30, 2017 and December 31, 2016, par value \$0.001	6,440	6,440
Additional paid-in capital	15,423,110	13,936,579
Accumulated deficit	(11,094,967)	(8,331,401)
Total Stockholders' Equity	4,334,583	5,611,618
Total Liabilities and Stockholders' Equity	<u>\$ 11,686,950</u>	<u>\$ 6,056,977</u>

See accompanying notes to the financial statements

Celcuity LLC
Condensed Statements of Operations
(unaudited)

	Three Months June 30,		Six Months June 30,	
	2017	2016	2017	2016
Operating expenses:				
Research and development	\$ 1,303,886	\$ 751,505	\$ 2,212,629	\$ 1,412,056
General and administrative	301,820	72,339	386,963	131,417
Total operating expenses	1,605,706	823,844	2,599,592	1,543,473
Loss from operations	(1,605,706)	(823,844)	(2,599,592)	(1,543,473)
Other income (expense)				
Interest expense	(186,659)	—	(186,686)	—
Interest income	16,150	3,859	22,712	4,019
Other income (expense), net	(170,509)	3,859	(163,974)	4,019
Net loss	<u>\$(1,776,215)</u>	<u>\$ (819,985)</u>	<u>\$(2,763,566)</u>	<u>\$(1,539,454)</u>
Net loss per share, basic and diluted	\$ (0.28)	\$ (0.13)	\$ (0.43)	\$ (0.25)
Weighted average common shares outstanding, basic and diluted	6,440,105	6,344,251	6,440,105	6,181,660

See accompanying notes to the financial statements

Celcuity LLC
Condensed Statements of Cash Flows
For the six months ended June 30, 2017 and 2016
(unaudited)

	2017	2016
Cash flows from operating activities:		
Net loss	\$ (2,763,566)	\$(1,539,454)
Adjustments to reconcile net loss to net cash used by operations:		
Depreciation	45,449	35,484
Stock-based compensation	422,816	36,301
Non-cash interest expense	186,759	—
Changes in operating assets and liabilities:		
Prepaid assets	(156,120)	—
Accounts payable	(34,771)	46,038
Accrued expenses	89,700	18,738
Net cash used by operating activities	<u>(2,209,733)</u>	<u>(1,402,893)</u>
Cash flows from investing activities:		
Purchases of property and equipment	(165,851)	(29,863)
Net cash used by investing activities:	<u>(165,851)</u>	<u>(29,863)</u>
Cash flows from financing activities:		
Proceeds from sale of common stock, net of issuance costs	—	3,718,300
Proceeds from sale of convertible promissory notes	7,493,330	—
Payments for debt issuance costs	(40,961)	—
Deferred transaction costs	(25,065)	—
Net cash provided by financing activities	<u>7,427,304</u>	<u>3,718,300</u>
Net increase in cash	5,051,720	2,285,544
Cash and cash equivalents at beginning of period	5,856,348	5,067,240
Cash and cash equivalents at end of period	<u>\$10,908,068</u>	<u>\$ 7,352,783</u>
Non-cash financing activities:		
Debt issuance costs related to sale of convertible promissory notes	\$ 844,170	\$ —
Debt discount related to investor and agent warrants (Note 7)	1,063,715	—
Deferred transaction costs included in accounts payable and accrued expenses	276,666	—

See accompanying notes to the financial statements

Celcuity LLC
Notes to Financial Statements
June 30, 2017 and 2016
(Unaudited)

1. Summary of Significant Accounting Policies

Nature of Business

Celcuity, LLC, a Minnesota limited liability company (the “Company”), is a cellular analysis company that is discovering new cancer sub-types and commercializing diagnostic tests designed to significantly improve the response rates of cancer patients treated with targeted therapies. The Company’s proprietary CELx diagnostic platform is currently the only commercially available technology that the Company is aware of to use a patient’s living tumor cells to evaluate the functional status of the cell signaling pathways associated with cancer. The CELx platform identifies the abnormal signaling activity driving a patient’s cancer and quantifies how effectively a targeted therapy can treat it. This enables physicians to select the therapeutic that precisely matches and inhibits a patient’s cellular dysfunction, which significantly increases the likelihood of a positive clinical outcome. The Company’s first analytically validated and commercially ready CELx test diagnoses two new sub-types of HER2-negative breast cancer. In late-2017, the Company will be fielding a prospective clinical trial to evaluate the efficacy of HER2 targeted therapies in patients with these newly identified cancer sub-types. In addition to the CELx tests for HER2-negative breast cancer, the Company is developing CELx tests to diagnose 14 new potential cancer sub-types in breast, lung, colon, ovarian, kidney, bladder and hematological cancers. The Company expects to launch these additional tests on a staggered basis over the next few years. The Company was cofounded in 2012 by Brian Sullivan and Lance Laing and is currently based in Minnesota. The Company has not generated any revenues to date.

Basis of Presentation

The accompanying unaudited financial statements include the accounts of the Company, and have been prepared in accordance with Article 10 of the Securities and Exchange Commission’s or the SEC, Regulation S-X. Accordingly, as permitted by Article 10, the unaudited financial statements do not include all of the information required by accounting principles generally accepted in the United States (U.S. GAAP). The Balance Sheet at December 31, 2016 was derived from the audited financial statements at that date and does not include all the disclosures required by U.S. GAAP. In the opinion of management, all adjustments which are of a normal recurring nature and necessary for a fair presentation have been reflected in the financial statements. These unaudited financial statements should be read in conjunction with the audited financial statements as of and for the year ended December 31, 2016 and the related footnotes thereto. Operating results for the three and six months ended June 30, 2017 are not necessarily indicative of the results to be expected during the remainder of the current year or for any future period.

Accounting Estimates

Management uses estimates and assumptions in preparing these financial statements in accordance with accounting principles generally accepted in the United States of America. Those estimates and assumptions affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported revenues and expenses. Actual results could differ from those estimates. Significant items subject to such estimates and assumptions include the useful lives of fixed assets and the valuation of stock-based compensation and warrants issued to investors and the placement agent, and prepaid or accrued clinical trial costs.

Cash and Cash Equivalents

The Company maintains its accounts primarily at one financial institution. At times throughout the year the Company’s cash balances may exceed amounts insured by the Federal Deposit Insurance Corporation. At June 30, 2017 and December 31, 2016, the Company had \$10,809,411 and \$5,842,193, respectively, in money market funds and US Treasury Bills that are considered cash equivalents.

Celcuity LLC
Notes to Financial Statements
June 30, 2017 and 2016
(Unaudited)

1. Summary of Significant Accounting Policies (Continued)

Property and Equipment

Property and equipment are stated at cost. Depreciation is provided over estimated useful lives using the straight-line method. Maintenance and repairs are expensed as incurred; major improvements and betterments are capitalized.

Estimated useful lives of property and equipment are as follows for the major classes of assets:

Asset Description	Estimated Lives
Furniture and Equipment	4
Leasehold Improvements	2-3

Long-Lived Assets

Long-lived assets, such as property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require a long-lived asset or asset group be tested for possible impairment, the Company first compares undiscounted cash flows expected to be generated by that asset or asset group to its carrying value. If the carrying value of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying value exceeds its fair value. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values, and third party independent appraisals, as considered necessary.

Deferred Transaction Costs

Deferred transaction costs primarily consist of direct incremental legal and other fees relating to the Company's contemplated initial public offering ("IPO"), and are capitalized as incurred. The deferred transaction costs will be offset against IPO proceeds upon the consummation of the offering. In the event the IPO is terminated, which would include a postponement of 90 days or greater, any deferred transaction costs will be expensed. Total costs incurred were \$301,730 for the three and six months ending June 30, 2017.

Fair Value of Financial Instruments

The Company's accounting for fair value measurements of assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring or nonrecurring basis adheres to the Financial Accounting Standards Board (FASB) 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 measurements involving significant unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1 Inputs: Unadjusted quoted prices in active markets for identical assets or liabilities accessible to the Company at the measurement date.
- Level 2 Inputs: Other than quoted prices included in Level 1 inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.
- Level 3 Inputs: Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at measurement date.

Celcuity LLC
Notes to Financial Statements
June 30, 2017 and 2016
(Unaudited)

1. Summary of Significant Accounting Policies (Continued)

The level in the fair value hierarchy within which a fair measurement in its entirety falls is based on the lowest level input that is significant to the fair value measurement in its entirety.

The carrying values of cash equivalents, restricted cash, accounts payable, accrued expenses and other financial working capital items approximate fair value at June 30, 2017 and December 31, 2016, due to the short maturity nature of these items.

Income Taxes

Celcuity is an LLC and is therefore a disregarded legal entity for income tax purposes. Accordingly, no provision for income taxes was included in the financial statements for all periods presented.

Primarily due to the Company's tax status, the Company does not have any significant tax uncertainties that would require recognition or disclosure. For years before 2013, the Company is no longer subject to U.S. federal or state income tax examination. The Company's policy is to recognize interest and penalties related to uncertain tax positions as a component of general and administrative expenses. As of June 30, 2017 and December 31, 2016, the Company did not have any significant uncertain tax positions.

Stock-Based Compensation

The Company's stock-based compensation consists of common stock options issued to certain employees and nonemployees of the Company. The Company recognizes compensation expense for employees based on an estimated grant date fair value using the Black-Scholes option-pricing method. The Company has elected to account for forfeitures as they occur.

The fair value of options granted to nonemployees is determined using the fair value of the service provided or the fair value of the option granted, whichever is more reliable. The fair value is measured at the value of the Company's common units at the earlier of the date that the commitment for performance by the counterparty has been reached or the counterparty's performance is complete. Awards granted to nonemployees are remeasured to fair value at each period end date until vested and expensed on a straight-line basis over the vesting period.

Research and Development

Research and development costs are expensed as incurred. Research and development costs amounted to \$2,212,629 and \$1,412,056 for the six months ending June 30, 2017 and 2016, respectively, and \$1,303,886 and \$751,505 for the three months ending June 30, 2017 and 2016, respectively.

Clinical Trial Costs

The Company records prepaid assets or accrued expenses for prepaid or estimated clinical trial costs conducted by third-party service providers, which include the conduct of preclinical studies and clinical trials. These costs are a significant component of the Company's research and development expenses. The Company accrues for these costs based on factors such as estimates of the work completed and in accordance with agreements established with its third-party service providers under the service agreements. The Company makes significant judgments and estimates in determining the accrued liabilities balance in each reporting period. As actual costs become known, the Company adjusts its prepaid assets or accrued expenses. The Company has not experienced any material differences between accrued costs and actual costs incurred. However, the status and timing of actual services performed, number of patients enrolled and the rate of patient enrollments may vary from the Company's estimates, resulting in adjustment to expense in future periods. Changes in these estimates that result in material changes to the Company's prepaid assets or accrued expenses could materially affect the Company's results of operations.

Celcuity LLC
Notes to Financial Statements
June 30, 2017 and 2016
(Unaudited)

1. Summary of Significant Accounting Policies (Continued)

Recently Adopted Accounting Pronouncements

In August 2014, FASB issued Accounting Standards Update (ASU) No 2014-15, “*Presentation of Financial Statements—Going Concern: Disclosure of Uncertainties about an Entity’s Ability to Continue as a Going Concern*”. The standard defines management’s going concern assessment and disclosure responsibilities. The Company has adopted this standard as of January 1, 2016 and determined that it has the necessary capital, based on current cash on hand and the convertible note offering closed in May 2017, to meet all its obligations for at least one year from the issuance of these financial statements.

In July 2017, FASB issued ASU No. 2017-11, *Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480), Derivatives and Hedging (Topic 815)*. The amendments in Part I of this Update change the classification analysis of certain equity-linked financial instruments (or embedded features) with down round features. When determining whether certain financial instruments should be classified as liabilities or equity instruments, a down round feature no longer precludes equity classification when assessing whether the instrument is indexed to an entity’s own stock. The amendments also clarify existing disclosure requirements for equity-classified instruments. As a result, a freestanding equity-linked financial instrument (or embedded conversion option) no longer would be accounted for as a derivative liability at fair value as a result of the existence of a down round feature. For freestanding equity classified financial instruments, the amendments require entities that present earnings per share (EPS) in accordance with Topic 260 to recognize the effect of the down round feature when it is triggered. That effect is treated as a dividend and as a reduction of income available to common shareholders in basic EPS. Convertible instruments with embedded conversion options that have down round features are now subject to the specialized guidance for contingent beneficial conversion features (in Subtopic 470-20, Debt—Debt with Conversion and Other Options), including related EPS guidance (in Topic 260). The amendments in Part II of this Update recharacterize the indefinite deferral of certain provisions of Topic 480 that now are presented as pending content in the Codification, to a scope exception. Those amendments do not have an accounting effect. For public business entities, the amendments in Part I of this Update are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. For all other entities, the amendments in Part I of this Update are effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. The Company has adopted this standard as of January 1, 2017 and it did not have an effect on its financial statements as none of their equity or convertible debt instruments contain a down-round feature.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, which provides guidance for accounting for leases. The new guidance requires companies to recognize the assets and liabilities for the rights and obligations created by leased assets, initially measured at the present value of the lease payments. The accounting guidance for lessors is largely unchanged. The ASU is effective for annual and interim periods beginning after December 15, 2018 for public entities and December 15, 2019 for all other entities, with early adoption permitted. It is to be adopted using a modified retrospective approach. The Company is currently evaluating the impact that the adoption of this guidance will have on the Company’s financial statements.

In May 2014 and amended in August 2015, the FASB issued ASU No. 2014-09 which amended the *Revenue from Contracts with Customers (Topic 606)* of the Accounting Standards Codification. The core principle of the new guidance is that an entity should recognize revenue to reflect the transfer of goods and services to customers in an amount equal to the consideration the entity receives or expects to receive. The ASU is effective for annual and interim periods beginning after December 15, 2017 for public entities and December 15, 2018 for all other entities, with early adoption permitted. The Company is currently evaluating the impact that the adoption of this guidance will have on the Company’s financial statements.

Celcuity LLC
Notes to Financial Statements
June 30, 2017 and 2016
(Unaudited)

2. Net Loss per Common Share

Basic and diluted net loss per common share is determined by dividing net loss attributable to common stockholders by the weighted-average common shares outstanding during the period. For all periods presented, the common shares underlying the options and warrants have been excluded from the calculation because their effect would be anti-dilutive. Therefore, the weighted-average shares outstanding used to calculate both basic and diluted loss per common shares are the same.

For the six months ending June 30, 2017 and 2016, 59,263 and 59,828 option and warrant share equivalents, respectively, have been excluded from the computations of diluted weighted-average shares outstanding.

3. Property and Equipment

Property and equipment consists of the following at June 30, 2017 and December 31, 2016:

	June 30, 2017 (unaudited)	December 31, 2016
Leasehold improvements	\$ 22,307	\$ 22,307
Furniture and equipment	443,871	278,020
	466,178	300,327
Less: Accumulated depreciation	(200,863)	(155,415)
Totals	\$ 265,315	\$ 144,912

Depreciation expense was \$45,449 and \$35,484 for the six months ending June 30, 2017 and 2016, respectively, and \$25,722 and \$18,466 for the three months ending June 30, 2017 and 2016.

4. Commitments

Lease Obligation

The Company leases its corporate space in Minneapolis, Minnesota. At June 30, 2017, the Company had the following minimum commitments for payment of rentals which at inception had a non-cancellable term of more than one year:

	Operating Lease
Remainder of 2017	\$26,379
2018	\$21,982

Annual rent expense for operating leases was \$25,076 and \$24,816 for the six months ending June 30, 2017 and 2016, respectively, and \$12,668 and \$12,408 for the three months ending June 30, 2017 and 2016, respectively. In connection with the corporate lease, the Company is required to maintain a \$50,000 standby letter of credit. The standby letter of credit expires on July 31, 2018.

Clinical Research Study

In May 2017, the Company entered into an agreement with a clinical research organization to conduct a clinical research study. The Company made a payment of \$300,000 in June 2017 and is obligated to make payments of \$50,000, \$200,000, and \$50,000 in 2017, 2018, and 2019, respectively. Additional payments will be due as patients are enrolled in the study. The maximum amount of these additional payments is estimated to be approximately \$2,040,000 over the course of the agreement.

Celcuity LLC
Notes to Financial Statements
June 30, 2017 and 2016
(Unaudited)

5. Members' Units to be Converted into Common Stock in Connection with IPO

Member Units

On August 23, 2017, the Company filed a Registration Statement on Form S-1 with the United States Securities and Exchange Commission (the "SEC") for its contemplated IPO. Immediately prior to the effectiveness of the Registration Statement, the Company intends to convert from a Minnesota limited liability company to a Delaware corporation, and pursuant to such conversion, the Company will be renamed Celcuity Inc. and all of the Company's outstanding member units will convert into common stock of Celcuity Inc. at a ratio of 40 member units for each share of common stock (the "LLC Conversion").

The Company has determined that the LLC Conversion is equivalent to a change in the Company's capital structure and has retrospectively adjusted the financial statements to present the conversion of member units to common stock of the successor entity. As a result of the proposed change in the capital structure, the following changes have been adjusted in these financial statements: (i) every 40 member units have been converted to one share of common stock, and (ii) the number of member units underlying each member unit option or member unit warrant have been proportionately decreased by the same ratio as the LLC Conversion and relabeled as stock options and warrants, and the exercise price of each outstanding member unit option and warrant has been proportionately increased so that the aggregate exercise price payable upon exercise shall remain unchanged. Accordingly, all option numbers, share numbers, warrant numbers, share prices, warrant prices, exercise prices and losses per share have been adjusted within these financial statements, on a retrospective basis to reflect the LLC Conversion.

The Company has one class of member units. The Company had 257,604,208 units issued and outstanding at June 30, 2017 and December 31, 2016. After giving effect to the proposed LLC Conversion on a retrospective basis, the number of common shares outstanding as of such dates is 6,440,105.

Warrants

In connection with the 2016 private placement unit offering, the Company issued ten-year warrants to the placement agent of the private placement. The warrants allow the agent to purchase up to 55,249 common shares at \$7.56 per share. The warrants are immediately exercisable and expire on January 14, 2026. These warrants are equity classified and the fair value of \$330,607 is reflected as additional paid-in capital. In connection with the unsecured convertible promissory note offering (Note 7), the Company issued ten-year warrants to purchase 48,615 common shares at a price of \$8.42 per share to the placement agent. At June 30, 2017 and December 31, 2016, the Company had warrants to purchase 103,864 and 55,249 common shares outstanding, respectively. In addition, the Company granted the note investors the right to receive a seven-year warrant to purchase 148,516 common shares at an exercise price that is equal to the conversion price of the notes (Note 7).

6. Stock-Based Compensation

The 2012 Equity Incentive Plan was adopted by the Company's board and approved by the members of the company on August 10, 2012, and was subsequently amended on November 12, 2012. The Company reserved a maximum of 625,000 common shares available for issuance under the 2012 Equity Incentive Plan, of which 442,685 common share were outstanding as of June 30, 2017. The 2012 Equity Incentive Plan provides for share options, restricted share awards, performance share awards or share bonuses. The exercise price of each share option granted under our 2012 Equity Incentive Plan is not less than one hundred percent (100%) of the fair market value of one share on the date of grant. The maximum permitted term of options granted under our 2012 Equity Incentive Plan is ten years. The Company's board has administered the plan and determined the provisions of incentive awards, including eligible recipients, number of shares subject to an incentive award, exercise price, vesting schedule, duration of an incentive award and other restrictions an incentive award may be subject to.

Celcuity LLC
Notes to Financial Statements
June 30, 2017 and 2016
(Unaudited)

6. Stock-Based Compensation (Continued)

The Black-Scholes option-pricing model was used to estimate the fair value of equity-based awards with the following weighted-average assumptions for the six months ending June 30:

	2017	2016
Risk-free interest rate	2.00%	2.00%
Expected volatility	75.0%	72.0%
Expected life (years)	6.25 to 10.00	6.25 to 10.00
Expected dividend yield	0%	0%

The inputs for the Black-Scholes valuation model require management's significant assumptions. The common share price was determined by the Company's board based on recent prices of common shares sold in private offerings. The risk-free interest rates were based on the rate for U.S. Treasury securities at the date of grant with maturity dates approximately equal to the expected life at the grant date. The expected life was based on the simplified method in accordance with the SEC Staff Accounting Bulletin Nos. 107 and 110 as the Company's shares are not publicly traded. The expected volatility was estimated based on historical volatility information of peer companies that are publicly available.

All assumptions used to calculate the grant date fair value of nonemployee options are generally consistent with the assumptions used for options granted to employees, except the expected life is equal to the contractual term. In the event the Company terminates any of its consulting agreements, the unvested options underlying the agreements would also be cancelled. Unvested nonemployee options are marked-to-market at each reporting period.

The following table summarizes the activity for all stock options outstanding for the six months ending June 30 under the Plan:

	2017		2016	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Options outstanding at beginning of year	302,088	\$5.91	114,525	\$3.07
Granted	148,150	\$8.38	169,750	\$7.60
Forfeited	(7,553)	\$3.60	—	\$ —
Balance at June 30	442,685	\$6.78	284,275	\$5.27
Options exercisable at June 30:	<u>166,119</u>	<u>\$5.46</u>	<u>52,192</u>	<u>\$2.78</u>
Weighted Average Grant Date Fair Value for Options Granted				
During the period:		\$5.29		\$5.22

The following table summarizes additional information about stock options outstanding and exercisable at June 30, 2017 under the Plan:

Options Outstanding				Options Exercisable		
Options Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Aggregate Intrinsic Value	Options Exercisable	Weighted Average Exercise Price	Aggregate Intrinsic Value
442,685	8.86	\$6.78	\$475,005	166,119	\$5.46	\$382,906

Celcuity LLC
Notes to Financial Statements
June 30, 2017 and 2016
(Unaudited)

6. Stock-Based Compensation (Continued)

The Company recognized stock-based compensation expense of \$422,816 and \$36,301 for the six months ending June 30, 2017 and 2016, respectively and \$326,548 and \$18,971 for the three months ending June 30, 2017 and 2016, respectively. Total unrecognized compensation cost related to stock options is estimated to be recognized as follows:

Remainder of 2017	\$ 259,655
2018	395,865
2019	354,499
2020	239,456
2021	61,081
Total estimated compensation cost to be recognized	<u>\$1,309,556</u>

7. Unsecured Convertible Promissory Notes

In April and May of 2017, the Company issued to certain accredited investors unsecured convertible promissory notes (the “Convertible Notes”) in the original principal amount of \$5,750,000 and \$2,587,500, respectively, for total principal of \$8,337,500, pursuant to the terms of a Confidential Private Placement Memorandum.

The Convertible Notes accrued interest at a rate of 1.25% per annum from date of issuance until December 31, 2018 on a non-compounding basis. All principal and interest is due on December 31, 2018. The Convertible Notes and all accrued interest thereon will automatically convert upon occurrence of a qualified financing, which is a closing of an equity offering of at least \$5,000,000. The conversion price of the Convertible Notes will be equal to the price at which the equity securities are sold in the qualified financing. If a qualified financing does not occur on or before December 31, 2018, the Convertible Notes and accrued interest will automatically convert into units of membership interest of the Company on December 31, 2018 at a conversion price of \$8.42 per unit. The Convertible Notes do not have any optional conversion rights.

In connection with the issuance of the Convertible Notes, the Company granted those investors the right to receive a seven-year warrant to purchase 148,516 common shares at an exercise price that is equal to the conversion price of the Convertible Notes. The gross proceeds of \$8,337,500 was allocated \$7,560,783 and \$776,717 to the Convertible Notes and warrants, respectively, based on their relative fair value. The relative fair value of the warrants of \$776,717 was recorded as debt discount and credited to additional paid-in capital. The resulting debt discount is amortized to interest expense using the effective interest method over the term of the Convertible Notes.

Cedar Point Capital, LLC (“Cedar”) served as the Company’s placement agent in connection with the placement of the Convertible Notes and earned a commission of approximately 10% of the original principal balance of such notes. Debt financing costs in the aggregate of \$885,131 (not including agent warrant discussed below), comprised primarily of the commission earned by Cedar, are amortized to interest expense using the effective interest method over the term of the Convertible Notes. In addition to the commission earned by Cedar, the Company issued an agent’s ten-year warrant to purchase 48,615 common shares. The exercise price is the same as the seven-year warrant issued to the Convertible Notes’ investors. The fair value of the agent’s warrant was \$286,999 and is considered additional debt discount and was credited to additional paid-in capital. During the quarter ended June 30, 2017, the Company amortized \$170,454 of debt discount and financing costs to interest expense for these Convertible Notes.

Celcuity LLC
Notes to Financial Statements
June 30, 2017 and 2016
(Unaudited)

8. Subsequent Events

On August 23, 2017, the Company filed a Registration Statement on Form S-1 with the SEC for its contemplated IPO. Immediately prior to the effectiveness of the Registration Statement, the Company intends to effect a LLC conversion, which it has determined to be a change in capital structure and has retrospectively adjusted the financial statements to reflect the intended LLC Conversion (Note 5).

2,400,000 Shares

celcuity
FUNCTIONAL CELLULAR ANALYSIS

Common Stock

PROSPECTUS

Craig-Hallum Capital Group

September 19, 2017

Until October 14, 2017 (25 days after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This requirement is in addition to the dealers' obligation to deliver a prospectus when acting as underwriter and with respect to their unsold allotments or subscriptions.
