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As filed with the Securities and Exchange Commission on September 8, 2015

Registration No. 333-204905

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Amendment No. 1
to

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Cerecor Inc.

(Exact name of registrant as specified in its charter)

Delaware	**2834**	**45-0705648**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

400 E. Pratt Street, Suite 606
Baltimore, Maryland 21202
(410) 522-8707
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Blake M. Paterson, M.D.
President and Chief Executive Officer
Cerecor Inc.
400 E. Pratt Street, Suite 606
Baltimore, Maryland 21202
(410) 522-8707
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Approximate date of commencement of proposed sale to public:
As soon as practicable after this registration statement is declared effective.

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

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

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

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

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

Large accelerated filer ☐	Accelerated filer ☐	Non-accelerated filer ☒ (Do not check if a smaller reporting company)	Smaller reporting company ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(2)(3)
Common stock, $0.001 par value per share	$34,057,688	$3,957.50

(1) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended, and includes the offering price attributable to shares of common stock that the underwriters have an option to purchase to cover over-allotments, if any.

(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.

(3) A registration fee of $3,674.83 has been paid previously in connection with this Registration Statement based on an estimate of the maximum aggregate offering price. The Registrant accordingly has paid the difference of $282.67 with this filing.

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

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

SUBJECT TO COMPLETION, DATED SEPTEMBER 8, 2015.

PRELIMINARY PROSPECTUS

4,230,769 Shares

Common Stock

This is the initial public offering of our common stock. We are offering 4,230,769 shares of common stock. We currently expect the initial public offering price to be between $6.00 and $7.00 per share of common stock.

No public market currently exists for our common stock. We have applied to list our common stock on the NASDAQ Capital Market under the symbol "CERC."

Investing in our common stock involves risks. See "Risk Factors" beginning on page 13 of this prospectus.

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012 and, as such, we have elected to comply with certain reduced public company disclosure requirements for this prospectus and future filings. See "Prospectus Summary—Implications of Being an Emerging Growth Company" on page 7 of this prospectus.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds to Cerecor (before expenses)	$	$

(1) We refer you to "Underwriting" beginning on page 189 of this prospectus for additional information regarding total underwriter compensation.

We have granted a 45-day option to the underwriters to purchase up to 634,615 additional shares of common stock to cover over-allotments, if any.

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

The underwriters expect to deliver the shares to purchasers on or about , 2015.

Maxim Group LLC

Laidlaw & Company (UK) Ltd.

Prospectus dated , 2015

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Neither we nor any of the underwriters has authorized anyone to provide you with information different from, or in addition to, that contained in this prospectus or any free writing prospectus we have prepared. If anyone provides you with different or inconsistent information, you should not rely on it. Neither we nor any of the underwriters is making an offer to sell or seeking offers to buy these securities in any jurisdiction where or to any person to whom the offer or sale is not permitted. The information in this prospectus is accurate only as of the date on the front cover of this prospectus and the information in any free writing prospectus that we may provide you in connection with this offering is accurate only as of the date of that free writing prospectus. Our business, financial condition, results of operations and future growth prospects may have changed since those dates.

Through and including , 2015 (25 days after the commencement of this offering), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to their unsold allotments or subscriptions.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third party 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.

For investors outside the United States: neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus we may provide to you in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus and any such free writing prospectus outside of the United States.

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 that may be important to you. You should read and carefully consider the following summary together with the entire prospectus, including our financial statements and the notes thereto appearing elsewhere in this prospectus and the matters discussed in the sections in this prospectus entitled "Risk Factors," "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" before deciding to invest in our common stock. 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" section and other sections of this prospectus.

Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to "Cerecor," "the company," "we," "us" and "our" refer to Cerecor Inc.

Overview

We are a clinical-stage biopharmaceutical company with the goal of becoming a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders. We have a portfolio of clinical and preclinical compounds that we believe are best-in-class due to their unique mechanism of action and where human proof of concept has been established for the compound or the target. We are currently pursuing the regulatory approval of three product candidates: CERC-301, CERC-501 and CERC-406.

CERC-301 is currently in Phase 2 development as an oral, adjunctive treatment of patients with major depressive disorder, or MDD, who are failing to achieve an adequate response to their current antidepressant treatment and are severely depressed. We received fast track designation by the United States Food and Drug Administration, or FDA, in November 2013 for CERC-301 for the treatment of MDD. CERC-301 belongs to a class of compounds known as antagonists, or inhibitors, of the N-methyl-D-aspartate, or NMDA, receptor, a receptor subtype of the glutamate neurotransmitter system that is responsible for controlling neurological adaptation. We believe CERC-301 will be a "first-in-class" medication that will cause a significant reduction in depression symptoms in a matter of days, as compared to weeks or months with conventional therapies, because it selectively blocks the NMDA receptor subunit 2B, or NR2B, which we believe provides rapid and significant antidepressant activity without the adverse side effect profile of non-selective NMDA receptor antagonists. We are also currently developing CERC-501, which is in Phase 2 development. We intend to first develop CERC-501 for adjunctive treatment of MDD and for substance use disorders (e.g., nicotine, alcohol, and/or cocaine). If we receive approval for CERC-501 for adjunctive treatment of MDD and for substance use disorders, we plan to further develop CERC-501 for the concurrent treatment of MDD and substance use disorders, or co-occurring disorders. CERC-501 was acquired in February 2015, and is a potent and selective kappa opioid receptor, or KOR, antagonist. KORs are believed to play key roles in modulating stress, mood and addictive behaviors, which form the basis of co-occurring disorders. We are preparing to initiate a clinical study to evaluate the effect of CERC-501 on aspects of tobacco withdrawal and reinstatement in the first half of 2016. In addition, we are considering conducting a Phase 2 clinical study in inadequately treated subjects with MDD currently on antidepressants, with an initiation date in the second half of 2016. Thereafter, we intend to pursue additional studies focused on substance use disorders, the adjunctive treatment of MDD and, depending on marketing approval, the treatment of co-occurring disorders. CERC-406 is our preclinical lead candidate from our proprietary platform of compounds that inhibit catechol-O-methyltransferase, or COMT, within the brain, which we refer to as our COMTi platform. We anticipate developing CERC-406 for the treatment of residual cognitive impairment symptoms in patients with MDD.

Members of our management team have extensive pharmaceutical product development and commercialization experience and they have played key roles in the development or commercialization of Prozac®, Zyprexa®, Lyrica®, Cymbalta®, Neurontin® and Abilify®, each of which is a neuroscience product that has generated over $1.0 billion of annual revenues. Collectively, our officers and directors have contributed to the submission of numerous Investigational New Drug Applications, or INDs, and nine New Drug Applications, or NDAs, to the FDA. Leveraging the experience of our management team, within the last 24 months we obtained IND clearance and received fast track designation for CERC-301 from the FDA, completed two clinical trials of CERC-301, selected CERC-406 as our preclinical lead candidate from our COMTi platform and, most recently, broadened our clinical pipeline by in-licensing CERC-501.

Product Candidates and Platform

Product Pipeline

The following table summarizes key information about our three product candidates and further detail regarding each product candidate is provided under the heading "Business" in this prospectus:

Product Candidate / Platform	Potential Indication(s)	Stage of Development	Anticipated Milestones
CERC-301	Adjunctive treatment of MDD with rapid onset	Phase 2	Data in the second half of 2016
CERC-501	Substance use disorders Adjunctive treatment of MDD Co-occurring disorders	Phase 2	Data in the second half of 2016
CERC-406	Residual cognitive impairment symptoms in MDD	Preclinical	IND submission anticipated in the first half of 2017

CERC-301

Depression is one of the most common serious medical and psychiatric disorders, with more than 150 million adults worldwide suffering from MDD at any given time, according to a 2003 report by the World Health Organization, or WHO, titled *Investing in Mental Health*. According to the IMS Institute for Healthcare Informatics' 2012 report titled *The Use of Medicines in the United States: Review of 2011,* over 264 million prescriptions totaling $11 billion were filled for depression in the United States in 2011. Nevertheless, many patients undergoing treatment with currently available pharmacologic MDD therapies experience delayed onset of therapeutic response, high rates of sub-optimal response, low rates of remission and treatment-limiting side effects.

CERC-301, which we have licensed from Merck & Co., Inc. and its affiliates, or Merck, belongs to a class of compounds known as antagonists of the NMDA receptor. Research on ketamine, such as *A Randomized Trial of an N-methyl-D-aspartate Antagonist in Treatment-Resistant Major Depression* study conducted by Dr. Carlos A. Zarate, Jr. and others, has provided evidence that NMDA receptor antagonists can have significant antidepressant activity within 24 hours of administration and that this effect may be associated with a biomarker of neuronal growth. We believe efficacy of the class is further supported by the off-label use of ketamine throughout the United States as a rapid-acting antidepressant in treatment resistant bipolar depression and MDD. Ketamine is an anesthetic that is a non-selective NMDA receptor antagonist, is not approved as an antidepressant and has several significant limitations, including the need for repeated intravenous administration in a clinic and undesirable side effects such as increases in blood pressure and significant psychotomimetic effects, including intoxication and hallucinations.

We believe CERC-301 has potential competitive advantages over current treatments because it is orally administered and it selectively blocks the NR2B. An August 2012 study published by the National Institute of Mental Health, or NIMH, provides support for the potential competitive advantages of CERC-301 because it demonstrated that CERC-301 had a rapid onset of antidepressant effect in subjects with treatment resistant depression along with an increase in a biomarker commonly seen with an antidepressant effect, without many of the side effects commonly seen in non-selective NMDA receptor antagonists.

In 2014 we completed an exploratory inpatient pharmacokinetic, or PK, and pharmacodynamics, or PD, study in healthy volunteers, which we refer to as the PK/PD study, and a Phase 2 outpatient efficacy study for the adjunctive treatment of patients with severe MDD who had recently experienced suicidal ideation. The PK/PD study provided evidence of safety and tolerability at daily doses up to 20 mg for seven days, along with apparent increases in the biomarker. In the Phase 2 study, CERC-301 was administered daily at a dose of 8 mg for 28 days, as an adjunctive treatment to subjects' current medications. While CERC-301 was well tolerated, there were no biomarker changes and the study failed to demonstrate any significant antidepressant effect, which we believe suggests that drug exposure was inadequate. Given the safety and tolerability of higher doses observed in the PK/PD study, we initiated a Phase 2 study utilizing higher doses and a revised dosing regimen, Clin301-203, in the third quarter of 2015 with results becoming available in the second half of 2016.

Upon completion of Clin301-203, and dependent upon study results, we plan to conduct a multi-dose, six week Phase 2b study of CERC-301 as adjunctive treatment in subjects with MDD who are currently experiencing a severe depressive episode despite stable ongoing treatment with a serotonin reuptake inhibitor, or SSRI, or serotonin norepinephrine reuptake inhibitor, or SNRI. We expect to initiate this dose ranging study in the first half of 2017. Thereafter we plan to engage the FDA in an end-of-phase 2 meeting to align plans and activities for potential regulatory approval which would include Phase 3 clinical studies, non-clinical NDA enabling studies and manufacturing activities.

CERC-501

Numerous studies have shown that many patients do not respond to their initial antidepressant therapy. For example, according to a 2006 report titled *Acute and Longer-Term Outcomes in Depressed Outpatients Requiring One or Several Treatment Steps: A STAR-D Report*, or the STAR-D Report, 51.4% of patients failed to respond, defined as achieving a 50% reduction in symptoms, and only 36.8% became symptom free, or achieved remission, after their initial 12-week treatment course with monoamine antidepressants. As such, physicians commonly will switch patients' antidepressants to manage depression, and patients may require two or three courses of treatment, before achieving satisfactory relief. The depression may persist following a course of treatment and additional medications may need to be used adjunctively. These adjunctive agents may include atypical antipsychotics, like aripiprazole and quetiapine, or other agents such as buproprion and lithium.

Drug abuse is a major public health problem that impacts society on multiple levels. According to *Results from the 2013 National Survey on Drug Use and Health*, a survey conducted by the Substance Abuse and Mental Health Services Administration, in 2013, an estimated 21.6 million persons in the United States aged 12 or older (8.2 percent of the population) were classified with substance dependence or abuse in the past year based on criteria specified in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition. Of these, 2.6 million were classified with dependence or abuse of both alcohol and illicit drugs, 4.3 million had dependence or abuse of illicit drugs but not alcohol, and 14.7 million had dependence or abuse of alcohol but not illicit drugs. Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics (pain relievers, tranquilizers, stimulants, and sedatives) used nonmedically. Furthermore, in 2013, heavy drinking was reported by 6.3 percent of the United States population aged 12 or older, or 16.5 million people. Cigarette smoking and exposure to tobacco smoke are the

leading causes of preventable disease and death in the United States, resulting in more than 480,000 premature deaths and $289 billion in direct health care expenditures and productivity losses each year. In 2013, 55.8 million persons (21.3 percent of the population) were current cigarette smokers. Despite progress over the past several decades, millions of adults still smoke cigarettes, the most commonly used tobacco product in the United States, and this continues to be major public health problem.

Mood, anxiety and substance use disorders, such as nicotine and alcohol dependence, are highly co-morbid in humans. Greater than 150 million adults worldwide suffer from MDD at any given time, according to a 2003 report by WHO titled *Investing In Mental Health*, and, according to the United States National Comorbidity Survey Replication, or NCS-R, more than 16 million adults in the United States, which represents approximately 6.7% of its entire adult population, will suffer from a MDD episode in a 12 month period. One common link between the co-occurrence of depression and substance use disorders may be stress. Sustained stressful experiences can induce despair and increase the risk of clinical depression and substance use. Substance use often provides relief from stress, such that the substance of abuse often becomes a potent behavioral reinforcer. Present pharmacologic treatments for co-occurring psychiatric and substance use disorders, or co-occurring disorders, consist either of treatment for the psychiatric disorder or the treatment for the addiction, but not the treatment of the underlying connection between the two. Therefore, we believe a tremendous need exists for pharmacotherapies effective in the treatment of co-occurring disorders.

In February 2015, we acquired rights to CERC-501, through an exclusive, worldwide, license from Eli Lilly and Company. CERC-501 is a high-binding, selective antagonist of KORs in the brain. KORs are localized in areas of the brain which effect reward and stress and are believed to impact mood, stress and addictive disorders. Preclinical data to date support the emerging consensus that selective kappa opioid antagonists have antidepressant and antianxiety like effects, reduce addictive substance consumption, and reduce behaviors and signs of drug withdrawal. As these studies demonstrate efficacy in animal models of both mood and addictive disorders, we believe that these studies provide the basis for the use of KOR antagonists in mood and substance use disorders and have the potential to reduce co-morbid mood disorders. We believe that the rationale for CERC-501 as an adjunctive treatment in MDD is supported by the reported Phase 2 results of Alkermes plc's, or Alkermes, investigational drug ALKS-5461, which is believed to be acting as a functional kappa antagonist. Alkermes has reported positive Phase 2 results for ALKS-5461 as an adjunctive antidepressant in MDD subjects and has initiated a Phase 3 development program. According to a press release by Alkermes, "ALKS-5461 had an onset of effect, as measured by MADRS, evident after one week of treatment." This suggests a rapid response to antidepressant treatment but not as rapid as what has been reported in the ketamine depression clinical trials.

For approximately the next 24 months, we expect to evaluate the potential human utility of CERC-501 in smoking dependence, depression, cocaine dependence, and anhedonia and mood disorders. The depression and anhedonia and mood studies are being performed in academic centers, under the auspices of the NIMH. We will be conducting the smoking study, which we refer to as Clin501-201. In addition, we are considering conducting a Phase 2 clinical study in inadequately treated subjects with MDD currently on antidepressants, with an initiation date in the second half of 2016. Thereafter, we intend to pursue additional studies focused on substance use disorders, the adjunctive treatment of MDD and, depending on marketing approval, the treatment of co-occurring disorders. We believe competitively positioning CERC-501 as a treatment of substance use disorders, a once-a-day, oral adjunctive treatment of MDD, and, depending on marketing approval, a treatment for co-occurring disorders it has the potential to generate widespread market acceptance. We further believe that, if CERC-501 has the ability to provide rapid onset of antidepressant effect, the market opportunity will be further expanded.

COMTi Platform

In March 2013, we acquired rights to our COMTi platform by means of an exclusive, worldwide license from Merck. Our COMTi platform consists of a library of approximately 1,800 compounds that we believe may penetrate the nervous system and preferentially inhibit COMT in the brain. COMT is an enzyme that breaks down dopamine and its inhibition has demonstrated applicability in treating certain neuropsychiatric conditions, including schizophrenia, Parkinson's disease and pathological gambling. We believe potent, brain-specific COMT inhibitors will selectively increase dopamine levels in the prefrontal cortex, which is the region of the brain that is responsible for verbal learning, working memory, attention tasks and decision making, thereby improving executive function. Moreover, our development efforts are specifically focused on a new generation of potent COMT inhibitors that we believe avoid off-target toxicity and side effects, such as liver toxicity and diarrhea, which are often seen with the previous generation of inhibitors, such as tolcapone and entacapone.

CERC-406

In January 2015, we selected CERC-406 as our first preclinical lead candidate from the COMTi platform. In 2015 and 2016, we intend to establish the data set necessary to select additional preclinical lead candidates and to initiate programs for treatment of various conditions where impaired executive function is a core symptom. These programs will target the improvement of working memory and executive function, which are key components of cognition.

CERC-406 is a small molecule, that research indicates is a selective COMT inhibitor with low inhibitory activity on peripheral COMT. We anticipate developing CERC-406 as a "first-in-class," oral adjunctive medication for patients with residual cognitive impairment symptoms suffering from MDD. We selected CERC-406 as our preclinical lead candidate from our COMTi platform because in preclinical testing it demonstrated lower potential of peripheral, off target side effects, rapid absorption and bioavailability, good brain penetration and a favorable dose-dependent biomarker profile in rats. CERC-406 has also demonstrated off-rate on brain COMT that is slower than tolcapone, implying good duration of effect. Finally, CERC-406 has demonstrated a favorable safety profile in all studies conducted to date. In preliminary studies it appears that CERC-406 may have favorable drug distribution and metabolism properties, suggesting that it has the potential to be administered orally on a once or twice daily basis. We plan to file an IND for CERC-406 in the first half of 2017 and, upon acceptance of this IND filing, we will commence Phase 1 studies to examine human safety, tolerability and pharmacokinetics that will determine suitability for further development.

Our Strategy

Our goal is to be a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders. Our strategic objectives include:

- rapidly advancing the clinical development of CERC-301;
- rapidly advancing the clinical development of CERC-501;
- advancing CERC-406 into IND-enabling studies;
- using our COMTi platform to build a pipeline of future product candidates for conditions where impaired executive function is a core symptom;
- establishing collaborations to maximize value; and
- expanding our product candidate portfolio through in-licensing and strategic acquisitions.

Management

Members of our management team have extensive pharmaceutical product development and commercialization experience and they have played key roles in the development or commercialization of Prozac®, Zyprexa®, Lyrica®, Cymbalta®, Neurontin® and Abilify®, each of which is a neuroscience product that has generated over $1.0 billion of annual revenues. Collectively, our directors and officers have contributed to the submission of numerous Investigational New Drug Applications, or INDs, and nine NDAs to the FDA. Leveraging the experience of our management team, we obtained IND clearance and received fast track designation for CERC-301 from the FDA, completed two clinical trials of CERC-301, selected CERC-406 as the initial candidate from our COMTi platform and, most recently, broadened our clinical pipeline by in-licensing CERC-501.

Risks Associated with Our Business

Our ability to implement our business strategy is subject to numerous risks and uncertainties that you should be aware of before making an investment decision. As a clinical-stage biopharmaceutical company, we face many risks inherent in our business and our industry generally. You should carefully consider all of the information set forth in this prospectus and, in particular, the information under the heading "Risk Factors," prior to making an investment in our common stock. These risks include, among others, the following:

- we have not received, and we may not receive, regulatory approval for CERC-301, CERC-501 or any other product candidates;
- we have no source of predictable revenue and have incurred significant operating losses since inception which has raised substantial doubt regarding our ability to continue as a going concern and has resulted in our independent registered public accounting firm including an explanatory paragraph in its report on our financial statements as of and for the year ended December 31, 2014 with respect to our ability to continue as a going concern;
- we may never become profitable and we may incur substantial and increasing net losses for the foreseeable future as we continue development of, seek marketing approvals for and begin to commercialize our product candidates and, as of June 30, 2015, we had an accumulated deficit of $49.2 million;
- we will need to obtain additional funding to continue operations, which may not be available to us on acceptable terms, or at all;
- our success is primarily dependent on the successful development, marketing approval and commercialization of our product candidates, all of which are in early development;
- if clinical trials of our product candidates fail to demonstrate safety and efficacy or do not otherwise produce positive results, such as the failure of our discontinued product candidate, FP01, to meet the primary endpoint in two Phase 2 studies and the failure of CERC-301 to meet the primary endpoint in one Phase 2 study, we may be unable to obtain marketing approvals and commercialize our product candidates;
- we are subject to marketing approval processes that are lengthy, expensive, time-consuming and unpredictable;
- the third-party coverage and reimbursement status of our product candidates is uncertain, and failure to obtain or maintain adequate coverage and reimbursement for products could limit our ability to market those products and decrease our ability to generate revenue;

- we must obtain state manufacturer and/or wholesaler licenses for the sale and distribution of our products into each state, and if we are delayed in obtaining these state licenses, or denied the licenses, even with FDA approval, we would not be able to sell or ship product into that state;

- we may be unable to recruit or retain key employees, including our senior management team, which may prevent us from successfully developing and commercializing our product candidates or otherwise implementing our business plan;

- we may not be able to obtain and enforce patent rights or other intellectual property rights that cover our product candidates and that are of sufficient breadth to prevent third parties from competing against us; and

- we depend on the performance of third parties, including contract research organizations and third-party manufacturers.

Our Corporate Information

We were incorporated as Ceregen Corporation in Delaware on January 31, 2011, and we subsequently changed our name to Cerecor Inc. Our principal executive offices are located at 400 E. Pratt Street, Suite 606, Baltimore, Maryland 21202 and our telephone number is (410) 522-8707. Our website address is *www.cerecor.com*. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

The trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. We do not intend our use or display of other companies' trademarks, trade names or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other companies or products.

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 of 2012, or the JOBS Act. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from specified 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;

- 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 shareholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company if we have more than $1.0 billion in annual revenues, have more than $700.0 million in market value of our capital

stock held by non-affiliates or issue more than $1.0 billion of non-convertible debt over a three-year period. We may choose to take advantage of some, but not all, of the available exemptions. We have taken advantage of some reduced reporting burdens in this prospectus. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

In addition, 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. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from 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.

THE OFFERING

Common stock offered	4,230,769 shares
Common stock to be outstanding immediately following this offering	8,860,912 shares
Over-allotment option	We have granted to the underwriters the option, exercisable for 45 days from the date of this prospectus, to purchase up to 634,615 additional shares of common stock.
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $24.8 million, or approximately $26.1 million if the underwriters exercise their over-allotment option in full, based on an assumed initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, to fund the costs of Phase 2 clinical development of CERC-301 and CERC-501, preclinical research for CERC-406, research and development to build our COMTi platform and potential in licensing or other acquisitions and for working capital and general corporate purposes. See "Use of Proceeds."
Risk Factors	You should read the "Risk Factors" section of this prospectus beginning on page 13 for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
Proposed NASDAQ Capital Market symbol	"CERC"

The number of shares of our common stock to be outstanding after this offering is based on 649,721 shares of our common stock outstanding as of June 30, 2015 and includes 3,980,422 shares of our common stock issuable upon the automatic conversion of all outstanding shares of our convertible preferred stock.

The number of shares of our common stock to be outstanding immediately following this offering excludes:

- 510,884 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2015, at a weighted-average exercise price of $8.88 per share;
- 490,756 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2015 at a weighted-average exercise price of $26.32 per share, which warrants are expected to remain outstanding upon the closing of this offering in accordance with their terms;
- 166,718 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2015 at a weighted-average exercise price of $8.40 per share, which warrants will expire upon the closing of this offering in accordance with their terms, unless exercised prior thereto;
- 22,328 shares of our common stock issuable upon the exercise of the warrant outstanding as of June 30, 2015 at an exercise price of $8.40 per share, which warrant is exercisable to purchase

shares of Series B convertible preferred stock prior to the completion of this offering, and which warrant is expected to remain outstanding upon the closing of this offering;

- 84,615 shares of our common stock issuable upon the exercise of the warrants issued in connection with this offering to the underwriters at an exercise price of $9.75, assuming an initial public offering price of $6.50 per share, which is the midpoint of this price range set forth on the cover page of this prospectus and a total of 4,230,769 shares of our common stock are sold in this offering;
- 254,236 shares of our common stock available for future issuance under our 2011 Stock Incentive Plan as of June 30, 2015, which upon effectiveness of our 2015 Omnibus Incentive Compensation Plan will be available for issuance under our 2015 Omnibus Incentive Compensation Plan; and
- 890,815 shares of our common stock available for future issuance under our 2015 Omnibus Incentive Compensation Plan, which will become effective upon the business day immediately preceding the date on which the registration statement is declared effective.

Unless otherwise indicated, all information in this prospectus assumes or gives effect to:

- a 1 for 28 reverse stock split of our common stock effected on September 1, 2015;
- no exercise of the outstanding options or warrants described above;
- the warrants outstanding as of June 30, 2015 to purchase an aggregate of 490,756 shares of our common stock at a weighted-average exercise price of $26.32 per share, which warrants will remain outstanding upon the closing of this offering in accordance with their terms;
- the warrant outstanding as of June 30, 2015 to purchase 625,208 shares of Series B preferred stock has become, in accordance with its terms, a warrant to purchase 22,328 shares of common stock at an exercise price of $8.40 per share upon the closing of this offering;
- no exercise by the underwriters of their option to purchase up to 634,615 additional shares of our common stock to cover over-allotments;
- the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 3,980,422;
- the amendment and restatement of our certificate of incorporation and bylaws upon the closing of this offering; and
- on a pro forma basis to give effect to the reclassification of approximately $1.5 million related to the Investor rights obligation and warrant liability from liabilities to permanent equity upon the closing of this offering.

SUMMARY FINANCIAL DATA

The following tables set forth our summary financial data for the periods indicated. The following summary financial data for the years ended December 31, 2013 and 2014 are derived from our audited financial statements appearing elsewhere in this prospectus. The following summary financial data for the six-month periods ended June 30, 2014 and 2015 and the selected balance sheet data as of June 30, 2015 are derived from our unaudited financial statements appearing elsewhere in this prospectus.

This summary financial data should be read together with the historical financial statements and related notes to those statements, as well as "Management's Discussion and Analysis of Financial Condition and Results of Operations," which are included elsewhere in this prospectus. See note 3 to our audited financial statements appearing elsewhere in this prospectus for information regarding computation of basic and diluted net loss per share of common stock, unaudited pro forma basic and diluted net loss per share of common stock and the unaudited pro forma weighted average basic and diluted common shares outstanding used in computing pro forma basic and diluted net loss per common share.

	Years Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
Operating expenses:				
Research and development	$ 8,914,084	$ 12,240,535	$ 5,610,764	$ 3,598,606
General and administrative	4,020,364	4,875,030	1,673,573	1,776,817
Total operating expenses	12,934,448	17,115,565	7,284,337	5,375,423
Loss from operations	(12,934,448)	(17,115,565)	(7,284,337)	(5,375,423)
Other income (expense):				
Change in fair value of warrant liabilities and investor rights obligation	(121,115)	2,266,161	385,990	(337,739)
Interest income (expense), net	10,555	(1,206,187)	(794,038)	(437,302)
Total other income (expense):	(110,560)	1,059,974	(408,048)	(775,041)
Net loss	(13,045,008)	(16,055,591)	(7,692,385)	(6,150,464)
Net loss attributable to common stockholders	$ (13,126,972)	$ (3,521,153)	$ (7,692,385)	$ (6,150,464)
Net loss per share of common stock, basic and diluted	$ (20.72)	$ (5.48)	$ (12.10)	$ (9.47)
Weighted-average shares of common stock outstanding, basic and diluted	633,669	642,052	635,714	649,721
Pro forma net loss per share of common stock—basic and diluted (unaudited)		$ (1.01)		$ (1.33)
Pro forma weighted-average shares of common stock outstanding, basic and diluted (unaudited)		3,501,768		4,630,143

The following table presents our summary balance sheet data:

- on an actual basis as of June 30, 2015;
- on a pro forma basis to give effect to (i) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 3,980,422 shares of our common stock and (ii) the reclassification of approximately $1.5 million related to the investor rights obligation and warrant liability from liabilities to permanent equity upon the closing of this offering; and

- on a pro forma as adjusted basis to give further effect to our sale of 4,230,769 shares of common stock in this offering at an assumed initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma as adjusted information presented in the summary balance sheet data is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease each of cash and cash equivalents, total assets and total stockholders' equity (deficit) on a pro forma as adjusted basis by approximately $3.8 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. Similarly, each increase or decrease of 1.0 million shares offered by us at the assumed initial public offering price would increase or decrease each of cash and cash equivalents, total assets and total stockholders' equity (deficit) on a pro forma as adjusted basis by approximately $5.9 million.

	As of June 30, 2015		
	Actual	Pro forma (unaudited)	Pro forma as adjusted (unaudited)
Cash and cash equivalents	$ 6,143	$ 6,143	$ 30,893
Total assets	7,582	7,582	32,332
Total liabilities	11,426	9,906	9,906
Convertible preferred stock	28,346	—	—
Total stockholders' equity (deficit)	(32,189)	(2,324)	22,426

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making your decision to invest in shares of our common stock, you should carefully consider the risks described below, together with the other information contained in this prospectus, including our financial statements and the related notes appearing at the end of this prospectus. We cannot assure you that any of the events discussed below will not occur. These events could have a material and adverse impact on our business, results of operations, financial condition, cash flows and future growth. If that were to happen, the trading price of our common stock could decline, and you could lose all or part of your investment.

Risks Related to Our Financial Position and Capital Needs

We have incurred significant net losses in every period since our inception and anticipate that we will continue to incur net losses in the future.

We are a clinical-stage biotechnology company with a limited operating history. Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate an adequate effect or acceptable safety profile, gain marketing approval and become commercially viable. To date, we have financed our operations primarily through private placements of our common and convertible preferred stock and convertible debt. We have no products approved for commercial sale and have not generated any revenue from product 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 profitable and have incurred significant losses in each period since our inception in 2011. For the years ended December 31, 2013 and 2014, and the six-month period ended June 30, 2015, we reported a net loss of $13.0 million, $16.1 million and $6.2 million, respectively. As of June 30, 2015, we had an accumulated deficit of $49.2 million. Substantially all of our operating losses have resulted from costs incurred in connection with our research and development program and from general and administrative costs associated with our operations.

We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek marketing approvals for, our product candidates. If we do not successfully develop and obtain marketing approval for our product candidates and effectively market and sell any product candidates that are approved, we may never generate product sales. Even if we do generate product sales, we may never achieve or sustain profitability on an annual basis. Furthermore, following this offering, we expect to incur additional costs associated with operating as a public company. We may also encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenues. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

We currently have no source of product revenue and may never become profitable.

Our ability to generate product revenue and achieve profitability depends on our ability, alone or with partners, to successfully complete the development of, and obtain the marketing approvals necessary to commercialize, our product candidates. To date, we have not generated any revenues from commercialization of our product candidates and we do not know when, or if, we will generate any such revenues. Our ability to generate product revenue and ultimately become profitable depends upon our ability, alone or partnered, to successfully commercialize products, including any of our current product candidates or other product candidates that we may develop, in-license or acquire in the future. We do not anticipate generating revenue from the sale of products for the foreseeable future.

Our ability to generate future product revenue from our current or future product candidates also depends on a number of additional factors, including our ability to:

- successfully complete research and clinical development of current and future product candidates;
- seek and obtain marketing approvals for product candidates for which we complete clinical trials;
- establish and maintain supply and manufacturing relationships with third parties, and ensure adequate and legally compliant manufacturing of bulk drug substances and drug products to maintain that supply;
- launch and commercialize product candidates for which we obtain marketing approval, if any, and if launched independently or under a co-promotion agreement, successfully establish a sales force, marketing and distribution infrastructure;
- identify and validate new product candidates;
- obtain coverage and adequate product reimbursement from third-party payors, including government payors;
- achieve market acceptance for our or our partners' products, if any;
- implement additional internal systems and infrastructure as needed;
- negotiate favorable terms in any collaboration, licensing or other arrangements into which we may enter;
- address any competing technological and market developments;
- establish, maintain and protect our intellectual property rights, including patents, trade secrets and know-how; and
- attract, hire and retain qualified personnel.

In addition, because of the numerous risks and uncertainties associated with biopharmaceutical product development, including that our product candidates may not advance through development or achieve the endpoints of applicable clinical trials, we are unable to predict the timing or amount of increased expenses. In addition, our expenses could increase beyond expectations if we decide to or are required by the United States Food and Drug Administration, or FDA, or foreign regulatory authorities to perform studies or trials in addition to those that we currently anticipate. Even if we complete the development and regulatory processes described above, we anticipate incurring significant costs associated with launching and commercializing these products, which may not gain market acceptance or achieve commercial success.

Even if we generate revenues from the sale of any of our products that may be approved, we may not become profitable and may need to obtain additional funding to continue operations. If we fail to become profitable or do not sustain profitability on a continuing basis, then the market price of our common stock could be depressed and we may be unable to raise capital, expand our business, diversify our product offerings, including obtaining new product candidates, or otherwise continue our operations at planned levels and be forced to reduce our operations. We do not know if or when we will achieve or maintain profitability.

Even if this offering is successful, we will require additional capital to finance our operations, which may not be available to us on acceptable terms, or at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our product development efforts or other operations.

As a research and development company, our operations have consumed substantial amounts of cash since inception. Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we expect our research and development expenses to increase substantially in connection with our ongoing activities, particularly as we advance our product candidates into clinical trials or obtain and advance additional product candidates. We estimate that the net proceeds from this offering will be approximately $24.8 million, based on an assumed initial public offering price of $6.50, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will fund our projected operating requirements into the fourth quarter of 2016. See "Use of Proceeds." However, circumstances may cause us to consume capital more rapidly than we currently anticipate. For example, as we move our product candidates CERC-301 and CERC-501 through clinical trials, we may fail to meet our primary or secondary endpoints, which occurred for our first Phase 2 study for CERC-301, requiring us to complete more trials than originally expected or we may discover serious adverse side effects. Moreover, as we move our COMT inhibitor, or COMTi, product candidates, such as CERC-406, through preclinical studies, submit Investigational New Drug Applications, or INDs, and initiate clinical trials, we may produce adverse results requiring us to find new product candidates. Any of these events may increase our development costs more than we expect. We may need to raise additional funds or otherwise obtain funding through collaborations if we choose to initiate additional clinical trials for product candidates. In any event, we will require additional capital to obtain marketing approval for, and to commercialize, future product candidates.

If we need to secure additional financing, such additional fundraising efforts may divert our management from our day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. If we do not raise additional capital when required or on acceptable terms, we may need to:

- significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates or cease operations altogether;
- seek strategic alliances for research and development programs at an earlier stage than we would otherwise desire or on terms less favorable than might otherwise be available; or
- relinquish, or license on unfavorable terms, our rights to technologies or any future product candidates that we otherwise would seek to develop or commercialize ourselves.

If we need to conduct additional fundraising activities and we do not raise additional capital in sufficient amounts or on terms acceptable to us, we may be prevented from pursuing development and commercialization efforts, which will have a material adverse effect on our business, financial condition, results of operations and prospects.

Our forecast of the period of time through which our financial resources will adequately support our operations is a forward-looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors, including the factors discussed elsewhere in this "Risk Factors" section. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect.

Our future funding requirements, both short and long term, will depend on many factors, including:

- the initiation, progress, timing, costs and results of preclinical and clinical studies for our product candidates and future product candidates we may develop;
- the outcome, timing and cost of seeking and obtaining regulatory approvals from the FDA and comparable foreign regulatory authorities, including the potential for such authorities to require that we perform more studies than we currently expect to perform;
- the cost to establish, maintain, expand and defend the scope of our intellectual property portfolio, including the amount and timing of any payments we may be required to make, or that we may receive, in connection with licensing, preparing, filing, prosecuting, defending and enforcing any patents or other intellectual property rights;
- the effect of competing technological and market developments;
- market acceptance of any approved product candidates;
- the costs of acquiring, licensing or investing in additional businesses, products, product candidates and technologies;
- the cost and timing of selecting, auditing and potentially validating a manufacturing site for commercial-scale manufacturing; and
- the cost of establishing sales, marketing and distribution capabilities for our product candidates for which we may receive marketing approval and that we determine to commercialize ourselves or in collaboration with our partners.

If a lack of available capital results in our inability to expand our operations or otherwise capitalize on our business opportunities, our business, financial condition and results of operations could be materially adversely affected.

Raising additional capital may cause dilution to our existing stockholders or restrict our operations.

Until we can generate a sufficient amount of revenue from our products, if ever, we expect to finance future cash needs through public or private equity or debt offerings. Additional capital may not be available on reasonable terms, if at all. If we raise additional funds through the issuance of additional debt or equity securities, such raises could result in dilution to our existing stockholders and/or increased fixed payment obligations. Furthermore, these securities may have rights senior to those of our common stock and could contain covenants that would restrict our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Any of these events could significantly harm our business, financial condition and prospects.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

Under Section 382 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change," generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period, the corporation's ability to use its pre-change federal net operating loss carryforwards, or NOLs, and other pre-change federal tax attributes (such as research tax credits) to offset its post-change income may be limited. We may experience ownership changes in the future as a result of the closing of this offering and subsequent shifts in our stock ownership. State NOL carryforwards may be similarly or more stringently limited. As a result, if we earn net taxable income,

our ability to use our pre-change NOLs to offset United States federal taxable income may be subject to limitations, which could potentially result in increased future tax liability to us.

In connection with the reporting of our financial condition and results of operations, we are required to make estimates and judgments which involve uncertainties, and any significant differences between our estimates and actual results could have an adverse impact on our financial position, results of operations and cash flows.

Our discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States, or GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, expenses and revenues and related disclosure of contingent assets and liabilities. For example, we estimate clinical trial costs incurred using subject data and information from our contract research organizations, or CROs. If we underestimate or overestimate these expenses, adjustments to expenses may be necessary in future periods. Any significant differences between our actual results and our estimates and assumptions could negatively impact our financial position, results of operations and cash flows.

Our limited operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We commenced active operations in the second quarter of 2011 and our operations to date have included organizing and staffing our company, business planning, raising capital and developing our product candidates and platform. Two of our product candidates, CERC-301 and CERC-501, are currently in Phase 2 development and we anticipate receipt of data in the second half of 2016 from the Phase 2 studies we are initiating for each product candidate. We have not yet, however, demonstrated our ability to successfully obtain marketing approvals, manufacture a commercial scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history.

In addition, as an early stage business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to transition at some point from a company with a research and development focus to a company capable of supporting commercial activities. We may not be able to successfully complete such a transition.

We expect our financial condition and operating results to continue to fluctuate significantly from quarter-to-quarter and year-to-year due to a variety of factors, many of which are beyond our control. Accordingly, you should not rely upon the results of any quarterly or annual periods as indications of future operating performance.

We may engage in in-licensing acquisitions or other strategic transactions that could impact our liquidity, increase our expenses and divert a significant amount of our management's time.

Since inception, we have in-licensed each of our product candidates and our COMTi platform. From time to time we may consider additional in-licensing of products and other strategic transactions, such as acquisitions of companies, asset purchases and out-licensing of product candidates or technologies. Additional potential transactions that we may consider include a variety of different business arrangements, including strategic partnerships, collaborations, joint ventures, business combinations and investments. Any such transaction may require us to incur non-recurring or other charges, may increase our near and long-term expenditures and may pose significant integration challenges or disrupt our management or business, which could adversely affect our operations and

financial results. For example, these transactions may entail numerous operational and financial risks, including:

- exposure to unknown liabilities;
- disruption of our business and diversion of our management's time and attention in order to develop acquired products, product candidates or technologies;
- incurrence of substantial debt or dilutive issuances of equity securities to pay for acquisitions;
- higher than expected acquisition and integration costs;
- write-downs of assets or goodwill or impairment charges;
- increased amortization expenses;
- difficulty and cost in combining the operations and personnel of any acquired businesses with our operations and personnel;
- impairment of relationships with key suppliers or other counterparties of any acquired businesses due to changes in management and ownership; and
- inability to retain key employees of any acquired businesses.

Our recurring operating losses and negative cash flows from operations have raised substantial doubt regarding our ability to continue as a going concern.

Our recurring operating losses and negative cash flows from operations raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of and for the year ended December 31, 2014 with respect to this uncertainty. We have no current source of revenues to sustain our present activities, and we do not expect to generate revenues until, and unless, the FDA or other regulatory agencies approve our product candidates and we successfully commercialize any such product candidates. Accordingly, our ability to continue as a going concern will require us to obtain additional financing to fund our operations. The perception of our ability to continue as a going concern may make it more difficult for us to obtain financing for the continuation of our operations and could result in the loss of confidence by investors, suppliers and employees.

Risks Related to Our Business and Industry

We are heavily dependent on the success of our product candidates, CERC-301 and CERC-501. If we fail to obtain marketing approval for and commercialize CERC-301 and CERC-501, or experience delays in doing so, our business will be materially harmed.

We intend to invest a significant portion of our efforts and financial resources in the development of our product candidates, CERC-301 and CERC-501; and we anticipate that we will allocate the majority of the proceeds of this offering toward their development. To date we have not marketed, distributed or sold any products. Our ability to generate revenues is substantially dependent on the development and commercialization of CERC-301 and CERC-501. If our clinical development for CERC-301 is successful, we plan to submit an NDA seeking approval to commercialize CERC-301 as an oral, adjunctive treatment of patients with MDD who are failing to achieve an adequate response to their current antidepressant treatment and, are severely depressed. If our clinical development for CERC-501 is successful, we plan to submit an NDA seeking approval to commercialize CERC-501 for adjunctive treatment of major depressive disorder, or MDD, and for substance use disorders (e.g., nicotine, alcohol, and/or cocaine). If we receive approval for CERC-501 for adjunctive treatment of MDD and for substance use disorders, we plan to further develop CERC-501 for the concurrent treatment of MDD and substance use disorders, or co-occurring disorders. We cannot commercialize

our product candidates prior to obtaining marketing approval from the FDA. Each of CERC-301 and CERC-501 is susceptible to the risks of failure inherent at any stage of drug development, including the appearance of unexpected adverse events, the failure to demonstrate efficacy and the FDA's determination that such candidate is not approvable. If we do not receive marketing approval for and commercialize either CERC-301 or CERC-501, we will not be able to generate product revenues in the foreseeable future, or at all.

If, following submission, our NDA for either product candidate is not accepted for substantive review or approved, the FDA may require that we conduct additional clinical or preclinical trials, manufacture additional validation batches or develop additional analytical test methods before it will reconsider our application for such product candidate. If the FDA requires additional studies or data, we would incur increased costs and delays in the marketing approval process, which may require us to expend more resources than we have available. In addition, the FDA may not consider any additional required trials that we perform and complete to be sufficient.

Even if we believe that the data from our clinical trials and analytical testing methods support marketing approval of CERC-301 or CERC-501 in the United States, the FDA may not agree with our analysis and approve our NDA. Any delay in obtaining, or an inability to obtain, marketing approvals would prevent us from commercializing CERC-301 or CERC-501, generating revenues and achieving profitability.

Only two of our product candidates that we intend to commercialize are in clinical development. Preclinical testing of other product candidates may not lead to them advancing into clinical trials. If we do not successfully complete preclinical testing of our product candidates or experience significant delays in doing so, our business will be materially harmed.

We have invested a significant portion of our efforts and financial resources in the identification and preclinical and clinical development of product candidates. For example, a significant portion of our financial resources were dedicated to the development of FP01, which we no longer plan to develop. Our ability to generate product revenues, which we do not expect will occur for many years, if ever, will depend heavily on our ability to advance our preclinical product candidates into clinical development and successfully complete preclinical testing of our clinical stage product candidates. The outcome of preclinical studies may not predict the success of clinical trials. Preclinical data are often susceptible to varying interpretations and analyses, and many companies that believed their product candidates performed satisfactorily in preclinical studies have nonetheless failed in clinical development. Our inability to successfully complete preclinical development could result in additional costs to us relating to product development and obtaining marketing approval and impair our ability to generate product revenues and commercialization and sales milestone payments and royalties on product sales.

If clinical trials of our product candidates fail to demonstrate safety and efficacy to the satisfaction of regulatory authorities or do not otherwise produce positive results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

Before obtaining required approvals from regulatory authorities for the sale of future product candidates, we alone, or with a partner, must conduct extensive clinical trials to demonstrate the safety and efficacy of the product candidates in humans. Clinical testing is expensive and difficult to design and implement, can take many years to complete and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing. For example, the Clin301-201 study for CERC-301 failed to meet its primary endpoint and, in addition, our discontinued product candidate FP01 failed to meet its primary endpoint in two Phase 2 clinical studies. The outcome of preclinical studies and early clinical trials may not predict the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. A number of companies in the pharmaceutical and biotechnology

industries have suffered significant setbacks in advanced clinical trials due to lack of efficacy or unacceptable safety profiles, notwithstanding promising results in earlier trials. Our product candidates will require additional clinical and preclinical development, management of clinical, preclinical and manufacturing activities, regulatory approval in multiple jurisdictions, obtaining manufacturing supply on our own or from a third party, building of a commercial organization, and substantial investment and significant marketing efforts before we generate any revenues from product sales. We do not know whether the clinical trials we or our partners may conduct will demonstrate adequate efficacy and safety to result in regulatory approval to market any of our product candidates in any particular jurisdiction or jurisdictions. If later stage clinical trials do not produce favorable results, our ability to achieve regulatory approval for any of our product candidates would be adversely impacted.

If we experience delays in clinical testing, we will be delayed in obtaining regulatory approvals and commercializing our product candidates, our costs may increase and our business may be harmed.

We do not know whether any clinical trials will begin as planned, whether the design will be revised prior to or during conduct of the study, completed on schedule or conducted at all. Our product development costs will increase if we experience delays in clinical testing. Significant clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do, which would impair our ability to successfully commercialize our product candidates and may harm our business, results of operations and prospects. Events which may result in a delay or unsuccessful completion of clinical development include:

- delays in reaching an agreement with or failure in obtaining authorization from the FDA, other regulatory authorities or institutional review boards, or IRBs, to commence or amend a clinical trial;
- imposition of a clinical hold or trial termination following an inspection of our clinical trial operations or trial sites by the FDA or other regulatory authorities, or due to concerns about trial design, or a decision by the FDA, other regulatory authorities, IRBs or the company, or recommendation by a data safety monitoring board, to place the trial on hold or otherwise suspend or terminate clinical trials at any time for safety issues or for any other reason;
- delays in reaching agreement on acceptable terms with prospective CROs and clinical trial sites;
- deviations from the trial protocol by clinical trial sites and investigators, or failing to conduct the trial in accordance with regulatory requirements;
- failure of our third parties, such as CROs, to satisfy their contractual duties or meet expected deadlines;
- failure to enter into agreements with third parties to obtain the results of clinical trials;
- delays in the importation and manufacture of clinical supply;
- delays in the testing, validation and delivery of the clinical supply of the product candidates to the clinical sites;
- for clinical trials in selected subject populations, delays in identification and auditing of central or other laboratories and the transfer and validation of assays or tests to be used to identify selected subjects;
- delays in recruiting suitable subjects to participate in a trial;
- delays in having subjects complete participation in a trial or return for post-treatment follow-up;
- delays caused by subjects dropping out of a trial due to side effects or disease progression;

- delays in adding new investigators and clinical trial sites;
- withdrawal of clinical trial sites from our clinical trials as a result of changing standards of care or the ineligibility of a site to participate in our clinical trials; or
- changes in government regulations or administrative actions or lack of adequate funding to continue the clinical trials.

Any inability by us or our partners to timely complete clinical development could result in additional costs to us relating to product development and obtaining marketing approval and impair our ability to generate product revenues and commercialization and sales milestone payments and royalties on product sales.

If we are unable to enroll appropriate subjects in clinical trials, we will be unable to complete these trials on a timely basis or at all.

Identifying and qualifying subjects to participate in clinical trials of our product candidates is critical to our success. The timing of our clinical trials depends on the speed at which we can recruit appropriate subjects to participate in testing our product candidates as well as completion of required follow-up periods. If subjects are unwilling to participate in our trials because of negative publicity from adverse events in the biotechnology industry or for other reasons, including competitive clinical trials for similar subject populations, the timeline for recruiting subjects, conducting trials and obtaining marketing approval of potential products may be delayed. These delays could result in increased costs, delays in advancing our product development, delays in testing the effectiveness of our technology or termination of the clinical trials altogether. Many factors affect subject enrollment, including:

- the size and nature of the subject population;
- the number and location of clinical sites we enroll;
- the proximity of subjects to clinical sites;
- perceived risks and benefits of the product candidate under trial;
- competition with other companies for clinical sites or subjects;
- competing clinical trials;
- the eligibility and exclusion criteria for the trial;
- the design of the clinical trial;
- effectiveness of publicity for the clinical trials;
- inability to obtain and maintain subject consents;
- ability to monitor subjects adequately during and after the administration of the product candidate and the ability of subjects to comply with the clinical trial requirements;
- risk that enrolled subjects will drop out or be withdrawn before completion; and
- clinicians' and subjects' perceptions as to the potential advantages of the drug being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating.

There is significant competition for recruiting subjects in clinical trials for product candidates for the treatment of depression, substance use disorders and impaired executive function, and we or our partners may be unable to enroll the subjects we need to complete clinical trials on a timely basis or at all. Furthermore, we rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials, and while we have agreements governing their committed activities, we have limited

influence over their actual performance. If we are unable to enroll sufficient subjects in our clinical trials, if enrollment is slower than we anticipate, or if our clinical trials require more subjects than we anticipate, our clinical trials may be delayed or may not be completed. If we experience delays in our clinical trials, the commercial prospects of our product candidates will be harmed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues.

We may in the future conduct, clinical trials for certain of our product candidates at sites outside the United States, and the FDA may not accept data from trials conducted in such locations.

We may in the future choose to conduct one or more of our clinical trials outside the United States. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of this data is subject to certain conditions imposed by the FDA. For example, the clinical trial must be well designed and conducted and performed by qualified investigators in accordance with ethical principles and current Good Clinical Practice, or GCPs. The trial population must also adequately represent the United States population, and the data must be applicable to the United States population and United States medical practice in ways that the FDA deems clinically meaningful. Generally, the patient population for any clinical trials conducted outside of the United States must be representative of the population for whom we intend to seek approval in the United States. In addition, while these clinical trials are subject to the applicable local laws, FDA acceptance of the data will be dependent upon its determination that the trials also complied with all applicable United States laws and regulations. There can be no assurance that the FDA will accept data from trials conducted outside of the United States. If the FDA does not accept the data from any of our clinical trials that we determine to conduct outside the United States, it would likely result in the need for additional trials, which would be costly and time-consuming and delay or permanently halt our development of the product candidate.

We may fail to successfully identify, in-license, acquire, develop or commercialize potential product candidates.

The success of our business depends in part upon our ability to identify and validate new therapeutic targets and identify, develop and commercialize therapeutics, which we may develop ourselves, in-license or acquire from others. Research programs designed to identify product candidates require substantial technical, financial and human resources, whether or not any product candidates are ultimately identified. Our research efforts may initially show promise in identifying potential therapeutic targets or candidates, yet fail to yield product candidates for clinical development for a number of reasons, including:

- our methodology, including our screening technology, may not successfully identify medically relevant potential product candidates;
- our competitors may develop alternatives that render our product candidates obsolete;
- we may encounter product manufacturing difficulties that limit yield or produce undesirable characteristics that increase the cost of goods, cause delays or make the product candidates unmarketable;
- our product candidates may cause adverse effects in subjects, even after successful initial toxicology studies, which may make the product candidates unmarketable;
- our product candidates may not be capable of being produced in commercial quantities at an acceptable cost, or at all;
- our product candidates may not demonstrate a meaningful benefit to subjects;

- our potential collaboration partners may change their development profiles or plans for potential product candidates or abandon a therapeutic area or the development of a partnered product; and

- our reliance on third party clinical trials may cause us to be denied access to clinical results that may be significant to further clinical development.

Additionally, we may focus our efforts and resources on potential programs or product candidates that ultimately prove to be unsuccessful. If any of these events occur, we may be forced to abandon our development efforts for a program or programs, which would have a material adverse effect on our business, operating results and prospects and could potentially cause us to cease operations.

We may not be successful in our efforts to leverage and expand our COMTi platform to build a pipeline of product candidates.

A key element of our strategy is to leverage and expand our COMTi platform to build a pipeline of product candidates for conditions with impairment of executive function, and to progress these product candidates through clinical development for the treatment of a variety of different types of diseases states involving impaired executive functioning. To date, we have selected a preclinical lead candidate for our COMTi platform, CERC-406, but CERC-406 or any other product candidates developed from our COMTi platform may not be safe or effective. Further, our continued development of the COMTi platform will be dependent upon receiving positive preclinical and clinical data that, in our judgment, merits advancing such program. Even if we are successful in continuing to build and expand our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. If we do not successfully develop and commercialize product candidates based upon our technological approach, we will not be able to obtain product revenues in future periods, which likely would result in significant harm to our financial position and adversely affect our stock price.

The marketing approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time-consuming, costly and inherently unpredictable. Our inability to obtain regulatory approval for our product candidates would substantially harm our business.

The time required to obtain approval to market new drugs by the FDA and comparable foreign regulatory authorities is unpredictable but typically takes many years following the commencement of preclinical studies and clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate and it is possible that none of our existing product candidates or any future product candidates will ever obtain regulatory approval. Moreover, the filing of an NDA requires a payment of a significant NDA user fee upon submission. The filing of an NDA for our product candidates may be delayed due to our lack of financial resources to pay such user fee.

Our product candidates could fail to receive regulatory approval from the FDA or a comparable foreign regulatory authority for many reasons, including:

- the FDA or comparable foreign regulatory authorities may disagree on the design or implementation of our clinical trials, including the methodology used in our studies, our chosen endpoints, our statistical analysis, or our proposed product indication. For instance, the FDA may find that the designs that we are utilizing in our completed and planned Phase 2 clinical trials of CERC-301 and CERC-501 do not support an adequate and well-controlled study. The FDA also may not agree with the various depression and other disease scales and evaluation

tools that we are using in our clinical trials to assess the efficacy of our product candidates. Further, the FDA may not agree with our endpoints and/or indications selected for our studies for CERC-301 and CERC-501;

- the FDA or comparable foreign regulatory authorities may disagree with our development plans for our product candidates. For instance, at this time we have not yet discussed our development plans for either CERC-501 or CERC-406 with the FDA. While we plan to discuss the development of these product candidates with the FDA, the FDA may not agree with our current development approach;

- our failure to demonstrate to the satisfaction of the FDA or comparable regulatory authorities that a product candidate is safe and effective for its proposed indication;

- our clinical trials may fail to meet the level of statistical significance required for approval. For example, in a proof of concept study of CERC-301 conducted by the National Institute of Mental Health, CERC-301 failed to provide a significant improvement in subjects receiving the compound as compared to those receiving a placebo, as measured by the Montgomery-Asberg Depression Rating Scale, the primary assessment tool. Significant improvements were, however, observed using alternative assessment tools, such as the Hamilton Depression Inventory 17 item scale or the Beck Depression Inventory. Further, our Clin301-201 Phase 2 study for CERC-301 failed to meet its primary endpoint;

- we may fail to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;

- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;

- data collected from clinical trials of our product candidates may be insufficient to support the submission and filing of an NDA, other submission or to obtain marketing approval. For example, the FDA may require additional studies to show that our product candidates are safe or effective;

- we may fail to obtain approval of the manufacturing processes or facilities of third-party manufacturers with whom we contract for clinical and commercial supplies; or

- there may be changes in the approval policies or regulations that render our preclinical and clinical data insufficient for approval.

The FDA or comparable foreign regulatory authority may require more information, including additional preclinical or clinical data to support approval, which may delay or prevent approval and our commercialization plans, or we may decide to abandon the development program. This lengthy approval process, as well as the unpredictability of future clinical trial results, may result in our failing to obtain approval to market our product candidates, which would significantly harm our business, results of operations and prospects. In addition, even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, including more limited patient populations, may require that contraindications, warnings or precautions be included in the product labeling, including a black-boxed warning, may grant approval contingent on the performance of costly post-marketing clinical trials or other post-market requirements, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

A fast track product, breakthrough therapy or priority review designation by the FDA for our product candidates may not lead to faster development or regulatory review or approval process, and it does not increase the likelihood that our product candidates will receive marketing approval.

We have received a fast track product designation for CERC-301 for the treatment of MDD and we may seek a breakthrough therapy designation and priority review designation. For CERC-501, or for certain of our other product candidates, if supported by the results of clinical trials, we may seek fast track product designation, breakthrough therapy designation and priority review designation. A fast track product designation is designed to facilitate the clinical development and expedite the review of drugs intended to treat a serious or life-threatening condition which demonstrate the potential to address an unmet medical need. A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Priority review designation is intended to speed the FDA marketing application review timeframe for drugs that treat a serious condition and, if approved, would provide a significant improvement in safety or effectiveness. For drugs and biologics that have been designated as fast track products or breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development. Sponsors of drugs designated as fast track products or breakthrough therapies may also be able to submit marketing applications on a rolling basis, meaning that the FDA may review portions of a marketing application before the sponsor submits the complete application to the FDA, as long as the sponsor pays the user fee upon submission of the first portion of the marketing application. For products that receive a priority review designation, the FDA's marketing application review goal is shortened to six months, as opposed to ten months under standard review. This review goal is based on the date the FDA accepts the marketing application for review, which typically adds approximately two months to the timeline for review and decision from the date of submission.

Designation as a fast track product, breakthrough therapy or priority review product is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a fast track product, breakthrough therapy or priority review product, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of such a designation for a product candidate may not result in a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures and does not assure ultimate marketing approval by the FDA. In addition, with regard to fast track products and breakthrough therapies, the FDA may later decide that the products no longer meet the conditions for qualification as either a fast track product or a breakthrough therapy or, for priority review products, decide that the time period for FDA review or approval will not be shortened.

As appropriate, we intend to seek all available periods of regulatory exclusivity for our product candidates. However, there is no guarantee that we will be granted these periods of regulatory exclusivity or that we will be able to maintain these periods of exclusivity.

The FDA grants product sponsors certain periods of regulatory exclusivity, during which the agency may not approve, and in certain instances, may not accept, certain marketing applications for competing drugs. For example, product sponsors may be eligible for five years of exclusivity from the date of approval of a new chemical entity, seven years of exclusivity for drugs that are designated to be orphan drugs, and/or a six-month period of exclusivity added to any existing exclusivity period or patent life for the submission of FDA requested pediatric data. While we intend to apply for all periods of market exclusivity that we may be eligible for, there is no guarantee that we will receive all such periods of market exclusivity. Additionally, under certain circumstances, the FDA may revoke the period of market exclusivity. Thus, there is no guarantee that we will be able to maintain a period of

market exclusivity, even if granted. Moreover, we have not sought to obtain orphan drug designation for any of our product candidates, which the FDA must first grant to be eligible for orphan drug exclusivity, but may if we determine that we may be eligible. In the case of orphan designation, other benefits, such as tax credits and exemption from user fees may be available. If we are not able to obtain or maintain orphan drug designation or any period of market exclusivity to which we may be entitled, we will be materially harmed, as we will potentially be subject to greater market competition and may lose the benefits associated with programs.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their marketing approval, limit the commercial profile of an approved label, or result in significant negative consequences following any marketing approval.

Undesirable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of marketing approval by the FDA or other comparable foreign regulatory authority. Results of our trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. For example, our Phase 2 clinical trials for CERC-301 could reveal adverse events, including, but not limited to, dose-related increases in blood pressure, palpitations, sleepiness, forgetfulness, headache, dizziness, fatigue, lightheadedness or impaired concentration. In our completed Phase 2 clinical study, Clin301-201, in general, CERC-301 was well tolerated with rates of adverse events similar to that of placebo. The most common treatment emergent adverse events were nervous system disorders, occurring in 25.9% and 26.9%, respectively, of subjects in the two active treatment sequences compared to 22.4% of subjects who received placebo during the entire study. Of the nervous system treatment emergent adverse events, dizziness was most common, occurring in 18.5% and 7.7%, respectively, of subjects in the two active treatment sequences compared to 2.0% of subjects who received placebo during the entire study. Four serious adverse events in three subjects were reported during the conduct of the study, two in a subject randomized to placebo (suicide attempt; alcoholism) and two in subjects that received CERC-301 (worsening depression with psychotic features and unstable angina). Overall, the adverse events observed in this study were generally consistent with the prior clinical trials conducted for CERC-301. In our planned clinical study of CERC-301, CLIN301-203, we will be increasing the CERC-301 dose administered to subjects. This dose increase could increase the risk of serious adverse events. Also, based on the previous studies conducted for CERC-501, Phase 2 studies of CERC-501 could reveal adverse events, including, but not limited to, dizziness, nausea, diarrhea, headache, anxiety, tachycardia and dyspepsia.

Should our clinical studies of our product candidates reveal undesirable side effects, we could suspend or terminate our trials or the FDA or comparable foreign regulatory authorities as well as IRBs could order us to suspend or cease clinical trials. The FDA or comparable regulatory authorities could also deny approval of our product candidates for any or all targeted indications or only for a limited indication or patient population or could require label warnings, contraindications or precautions, including black box warnings, post-market studies, testing and surveillance programs or other conditions including distribution restrictions or other risk management mechanisms under a risk evaluation and mitigation strategy, or REMS. Drug-related side effects could affect subject recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition and prospects significantly.

Additionally, if one or more of our product candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- we may suspend marketing of, or withdraw or recall, such product;
- regulatory authorities may withdraw approvals of such product;

- regulatory authorities may require additional warnings on the label or other label modifications;
- the FDA or other regulatory bodies may issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings about such product;
- the FDA may require the establishment or modification of a REMS or other restrictions on marketing and distribution, or a comparable foreign regulatory authority may require the establishment or modification of a similar strategy that may, for instance, require us to issue a medication guide outlining the risks of such side effects for distribution to patients or restrict distribution of our products and impose burdensome implementation requirements on us;
- regulatory authorities may require that we conduct post-marketing studies;
- we could be sued and held liable for harm caused to subjects or patients; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate or otherwise materially harm the commercial prospects for the product candidate, if approved, and could significantly harm our business, financial condition, results of operations and prospects.

Changes in product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates are developed through preclinical studies to late-stage clinical trials towards regulatory approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered in an effort to optimize processes and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials. Such changes may also require additional testing, FDA notification or FDA approval.

Similarly, changes in the location of manufacturing or addition of manufacturing facilities may increase our costs, and require additional studies and FDA approval. This may require us to ensure that the new facility meets all applicable regulatory requirements, is adequately validated and qualified, and to conduct additional studies of product candidates manufactured at the new location. Any of the above could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay regulatory approval of our product candidates and jeopardize our ability to commence product sales and generate revenue.

Even if we complete the necessary clinical trials, we cannot predict when or if we will obtain marketing approval to commercialize a product candidate or the approval may be for a more narrow indication than we expect.

We cannot commercialize a product candidate until the appropriate regulatory authorities have reviewed and approved the product candidate. Even if our product candidates demonstrate safety and efficacy in clinical trials, the regulatory agencies may not complete their review processes in a timely manner, or we may not be able to obtain marketing approval from the relevant regulatory agencies. Additional delays may result if the FDA, an FDA Advisory Committee or other regulatory authority recommends non-approval or restrictions on approval. In addition, we may experience delays or rejections based upon additional government regulation from future legislation or administrative action, or changes in regulatory agency policy during the period of product development, clinical trials and the review process. Regulatory authorities also may approve a product candidate for fewer or more limited indications than requested, may impose significant limitations in the form of narrow indications, warnings, including black-box warnings, precautions or contra-indications with respect to conditions of

use or may grant approval subject to the performance of costly post-marketing clinical trials or other post-marketing requirements, including a REMS. In addition, regulatory agencies may not approve the labeling claims that are necessary or desirable for the successful commercialization of our product candidates. For instance, in 2007, the FDA requested that makers of all antidepressant medications update an existing black-box warning about an increased risk of suicidal thought and behavior. Our drugs, if approved, may be required to carry warnings comparable to this and other class-wide warnings. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

Even if our product candidates receive marketing approval, we will still be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to labeling and other restrictions and market withdrawal and we may be subject to administrative sanctions or penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

Even if we obtain marketing approval for a product candidate, we would be subject to ongoing requirements by the FDA and comparable foreign regulatory authorities governing the manufacture, quality control, further development, labeling, packaging, storage, distribution, safety surveillance, import, export, advertising, promotion, recordkeeping and reporting of safety and other post-market information. The FDA and comparable foreign regulatory authorities will continue to closely monitor the safety profile of any product even after approval. If the FDA or comparable foreign regulatory authorities become aware of new safety information after approval of any of our product candidates, they may withdraw approval, require labeling changes or establishment of a REMS or similar strategy, impose significant restrictions on a product's indicated uses or marketing, or impose ongoing requirements for potentially costly post-approval studies or post-market surveillance. In addition, any marketing approvals that we obtain for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing and other requirements, including Phase 4 clinical trials, imposition of a REMS and surveillance to monitor the safety and efficacy of the product candidate. For example, during a meeting with the FDA regarding CERC-301, the FDA noted that it does not currently accept the explicit labeling claim of a rapid-acting antidepressant, or RAAD, and indicated that we may therefore be subject to limitations on our ability to label and promote the product as a RAAD upon approval.

In addition, manufacturers of drug products and their facilities, including contracted facilities, are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with current Good Manufacturing Practice, or GMP, regulations and standards. If we or a regulatory agency discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, we may be subject to reporting obligations and a regulatory agency may impose restrictions on that product, the manufacturing facility or us, or our suppliers, including requesting recalls or withdrawal of the product from the market or suspension of manufacturing. If we, our product candidates, our contractors, the manufacturing facilities for our product candidates or others working on our behalf fail to comply with applicable regulatory requirements, either before or after marketing approval, a regulatory agency may:

- issue Warning Letters or Untitled Letters;
- mandate modifications to promotional materials or labeling, or require us to provide corrective information to healthcare practitioners;

- require us to enter into a consent decree, which can include imposition of various fines, reimbursements for inspection costs, required due dates for specific actions and penalties for noncompliance;
- seek an injunction or impose civil or criminal penalties or monetary fines, restitution or disgorgement, as well as imprisonment;
- suspend or withdraw marketing approval;
- suspend or terminate any ongoing clinical studies;
- refuse to approve pending applications or supplements to applications filed by us;
- debar us from submitting marketing applications, exclude us from participation in federal healthcare programs, require a corporate integrity agreement or deferred prosecution agreements, debar us from government contracts and refuse future orders under existing contracts;
- suspend or impose restrictions on operations, including restrictions on marketing, distribution or manufacturing of the product, or the imposition of costly new manufacturing requirements or use of alternative suppliers; or
- seize or detain products, refuse to permit the import or export of products, or request that we initiate a product recall.

The occurrence of any event or penalty described above may inhibit our ability to commercialize our products and generate revenue.

Advertising and promotion of any product candidate that obtains approval in the United States will be heavily scrutinized by the FDA, the Department of Justice, the Department of Health and Human Services' Office of Inspector General, state attorneys general, members of Congress and the public. While the FDA does not restrict physicians from prescribing approved drugs for uses outside of the drugs' approved labeling, known as off-label use, pharmaceutical manufacturers are prohibited from promoting and marketing their products for such uses. Violations, including promotion of our products for off-label uses, are subject to enforcement letters, inquiries, investigations, civil and criminal sanctions by the government, corporate integrity agreements, deferred prosecution agreements, debarment from government contracts and refusal of future orders under existing contracts, and exclusion from participation in federal healthcare programs. Additionally, comparable foreign regulatory authorities will heavily scrutinize advertising and promotion of any product candidate that obtains approval outside of the United States.

In the United States, engaging in the impermissible promotion of our products for off-label uses can also subject us to false claims litigation under federal and state statutes, which can lead to civil and criminal penalties and fines, debarment from government contracts and refusal of future orders under existing contracts, deferred prosecution agreements, and corporate integrity agreements with governmental authorities that materially restrict the manner in which a company promotes or distributes drug products. These false claims statutes include the federal civil False Claims Act, which allows any individual to bring a lawsuit against a pharmaceutical company on behalf of the federal government alleging submission of false or fraudulent claims, or causing to present such false or fraudulent claims, for payment by a federal program such as Medicare or Medicaid. If the government decides to intervene and prevails in the lawsuit, the individual will share in any fines or settlement funds. If the government does not intervene, the individual may proceed on his or her own. Since 2004, these False Claims Act lawsuits against pharmaceutical companies have increased significantly in volume and breadth, leading to several substantial civil and criminal settlements, such as settlements regarding certain sales practices promoting off-label drug uses involving fines that are as much as $3.0 billion. This growth in litigation has increased the risk that a pharmaceutical company will have to

defend a false claim action, pay settlement fines or restitution, agree to comply with burdensome reporting and compliance obligations, and be excluded from Medicare, Medicaid and other federal and state healthcare programs. If we do not lawfully promote our approved products, we may become subject to such litigation and, if we do not successfully defend against such actions, those actions may have a material adverse effect on our business, financial condition, results of operations and prospects.

The FDA's policies may change and additional government regulations may be enacted that could prevent, limit or delay marketing approval, and the sale and promotion of our product candidates. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, which would adversely affect our business, prospects and ability to achieve or sustain profitability.

If we are unable to, or are delayed in obtaining, state regulatory licenses for the distribution of our products, we would not be able to sell our product candidates in such states.

The majority of states require manufacturer and/or wholesaler licenses for the sale and distribution of drugs into that state. The application process is complicated, time consuming and requires dedicated personnel or a third party to oversee and manage. If we are delayed in obtaining these state licenses, or denied the licenses, even with FDA approval, we would not be able to sell or ship product into that state which would adversely affect our sales and revenues.

If any of our product candidates are ultimately regulated as controlled substances, we, our contract manufacturers, as well as distributors, prescribers, and dispensers will be required to comply with additional regulatory requirements which could delay the marketing of our product candidates, and increase the cost and burden of manufacturing, distributing, dispensing, and prescribing our product candidates.

Before we can commercialize our product candidates, the United States Drug Enforcement Administration, or DEA, may need to determine the controlled substance Schedule, taking into account the recommendation of the FDA. This may be a lengthy process that could delay our marketing of a product candidate and could potentially diminish any regulatory exclusivity periods for which we may be eligible. While we currently do not know whether any of our product candidates will be considered to be controlled substances, certain of our product candidates may be regulated as controlled substances.

If any of our product candidates are regulated as controlled substances, depending on the controlled substance schedule in which the product candidates are placed, we, our contract manufacturers, and any distributers, prescribers, and dispensers of the scheduled product candidates may be subject to significant regulatory requirements, such as registration, security, recordkeeping, reporting, storage, distribution, importation, exportation, inventory, quota and other requirements administered by the DEA. Moreover, if any of our product candidates are regulated as controlled substances, we and our contract manufacturers would be subject to initial and periodic DEA inspection. If we or our contract manufacturers are not able to obtain or maintain any necessary DEA registrations, we may not be able to commercialize any product candidates that are deemed to be controlled substances or we may need to find alternative contract manufacturers, which would take time and cause us to incur additional costs, delaying or limit our commercialization efforts.

Because of their restrictive nature, these laws and regulations could limit commercialization of our product candidates, should they be deemed to contain controlled substances. Failure to comply with the applicable controlled substance laws and regulations can also result in administrative, civil or criminal enforcement. The DEA may seek civil penalties, refuse to renew necessary registrations, or initiate administrative proceedings to revoke those registrations. In some circumstances, violations could result

in criminal proceedings or consent decrees. Individual states also independently regulate controlled substances.

Our failure to obtain regulatory approval in international jurisdictions would prevent us from marketing our product candidates outside the United States, which would limit our market opportunities and adversely affect our business.

In order to market and sell our products in other jurisdictions, we must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, we must secure product reimbursement approvals before regulatory authorities will approve the product for sale in that country. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. Further, clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. If we fail to comply with the regulatory requirements in international markets and receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed and our business will be adversely affected. We may not obtain foreign regulatory approvals on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions. Approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. Also, regulatory approval for any of our product candidates may be withdrawn. However, the failure to obtain approval in one jurisdiction may negatively impact our ability to obtain approval in another jurisdiction. Our failure to obtain approval of any of our product candidates by regulatory authorities in another country may significantly diminish the commercial prospects of that product candidate and our business prospects could decline.

If we obtain approval to commercialize our product candidates outside of the United States, a variety of risks associated with international operations could materially adversely affect our business.

If any of our product candidates are approved for commercialization, we may enter into agreements with third parties to market them on a worldwide basis or in more limited geographical regions. We expect that we will be subject to additional risks related to entering into international business relationships, including:

- different regulatory requirements for approval of drugs in foreign countries;
- the potential for so-called parallel importing, which is what happens when a local seller, faced with high or higher local prices, opts to import goods from a foreign market (with low or lower prices) rather than buying them locally;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;

- foreign currency fluctuations, which could result in increased operating expenses and reduced revenues, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- potential liability under the Foreign Corrupt Practices Act of 1977 or comparable foreign regulations;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires.

These and other risks associated with our international operations may materially adversely affect our ability to attain or maintain profitable operations.

We face substantial competition and rapid technological change and the possibility that others may discover, develop or commercialize products before or more successfully than us.

The biotechnology and pharmaceutical industries are intensely competitive and subject to rapid and significant technological change. We face competition with respect to our current product candidates and will face competition with respect to any future product candidates from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. Many of our competitors have significantly greater financial, technical and human resources. Smaller and early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our competitors may obtain marketing approval of their products more rapidly than we may or may obtain patent protection or other intellectual property rights that limit our ability to develop or commercialize our product candidates. Our competitors may also develop drugs that are more effective, more convenient, more widely used and less costly or have a better safety profile than our products and these competitors may also be more successful than us in manufacturing and marketing their products.

Our competitors will also compete with us in recruiting and retaining qualified scientific, management and commercial personnel, establishing clinical trial sites and subject registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

There are numerous currently approved therapies for treating depression and, consequently, competition in the depression market is intense. Many of these approved drugs are well established therapies or products and are widely accepted by physicians, patients and third party payors. Some of these drugs are branded and subject to patent protection and non patent regulatory exclusivity, and others are available on a generic basis. For example, CERC 301 will compete with drugs used as adjunctive therapies for the treatment of MDD such as Abilify, marketed by Otsuka America Pharmaceutical, Inc.; Seroquel XR, marketed by AstraZeneca Pharmaceuticals LP, or AstraZeneca; and buproprion, a generic drug. In addition, to our knowledge, there are five competitive rapid onset antidepressant or anti-suicide programs in development: esketamine, which is in Phase 3 development by Johnson & Johnson, or J&J, and is being developed to be administered as a nasal spray; AZD8108, which is in Phase 1 development by AstraZeneca and is being developed to be administered orally; Rapastinel, which is in Phase 3 development by Naurex Inc., or Naurex, which recently entered into an agreement to be acquired by Allergan plc., and is being developed to be administered intravenously; NRX 1074 by Naurex has completed a single intravenously administered dose Phase 2 study, which, along with oral and intravenous Phase 1 pharmacokinetic, or PK, findings, will be used to select an oral

dose for a repeat-dose Phase 2 study; and ALKS-5461, which is in Phase 3 development by Alkermes plc, or Alkermes, and is being developed to be administered orally as an adjunctive therapy and has shown signals of rapid onset as an adjunctive therapy. With respect to CERC-501, to our knowledge, there are no approved pharamacologic treatments for co-occurring disorders, however, there are two competitive programs in development: ALKS 5461, which is believed to be acting as a functional KOR antagonist that is now in Phase 3 development for MDD as an adjunctive in patients who have no more than two inadequate responses to antidepressant therapy and LY2940094, which is in Phase 2 development by Eli Lilly and Company, or Lilly, and is being developed for the treatment of both MDD and alcohol dependence.

Insurers and other third-party payors may also encourage the use of generic products or specific branded products. We expect that if CERC-301 is approved, it may be priced at a significant premium over competitive generic, including branded generic, products. In addition, any new product that competes with an approved product must demonstrate compelling advantages in efficacy, convenience, tolerability and safety in order to overcome price competition and to be commercially successful. This may make it difficult for us to differentiate our product from currently approved therapies, which may adversely impact our business strategy. If we are not able to compete effectively against our current and future competitors, our business will not grow and our financial condition and operations will suffer. Moreover, many other companies are developing new therapeutics, and we cannot predict what the standard of care will be as our product candidates progress through clinical development.

We believe that our ability to successfully compete will depend on, among other things:

- the efficacy and safety profile of our product candidates, including relative to marketed products and product candidates in development by third parties;
- the claims we may make for our product candidates based on the approved label or any restrictions placed upon our marketing and distribution of our product candidates;
- the time it takes for our product candidates to complete clinical development and receive marketing approval;
- how quickly and effectively we alone, or with a partner, can market and launch any of our product candidates that receive marketing approval;
- the ability to commercialize any of our product candidates that receive marketing approval;
- the price of our products, including in comparison to branded or generic competitors;
- the ability to collaborate with others in the development and commercialization of new products;
- whether coverage and adequate levels of reimbursement are available under private and governmental health insurance plans, including Medicare;
- the ability to establish, maintain and protect intellectual property rights related to our product candidates;
- the entry of generic versions of our products onto the market;
- the number of products in the same therapeutic class as our product candidates;
- the ability to secure favorable managed care formulary positions, including federal healthcare program formularies;
- the ability to manufacture commercial quantities of any of our product candidates that receive marketing approval; and
- acceptance of any of our product candidates that receive marketing approval by physicians and other healthcare providers.

Our product candidates may not achieve adequate market acceptance among physicians, patients, third-party payors and others in the medical community necessary for commercial success.

Even if our product candidates receive marketing approval, they may not gain adequate market acceptance among physicians, patients and others in the medical community. Our commercial success also depends on coverage and adequate reimbursement of our product candidates by third-party payors, including government payors, generally, which may be difficult or time-consuming to obtain, may be limited in scope or may not be obtained in all jurisdictions in which we may seek to market our products. The degree of market acceptance of any of our approved product candidates will depend on a number of factors, including:

- the efficacy and safety profile as demonstrated in clinical trials;
- the claims we may make for our product candidates based on the approved label or any restrictions placed upon our marketing and distribution of our product candidates;
- the timing of market introduction of the product candidate as well as competitive products;
- the clinical indications for which the product candidate is approved;
- acceptance of the product candidate as a safe and effective treatment by physicians, providers and patients;
- the potential and perceived advantages of product candidates over alternative treatments, including any similar generic treatments;
- the cost of treatment in relation to alternative treatments;
- the availability of coverage and adequate reimbursement by third parties and government authorities;
- relative convenience and ease of administration;
- the frequency and severity of adverse events;
- the effectiveness of sales and marketing efforts; and
- unfavorable publicity relating to the product candidate.

If any product candidate is approved but does not achieve an adequate level of acceptance by physicians, hospitals, third-party payors and patients, we may not generate or derive sufficient revenue from that product candidate and may not become or remain profitable.

Even if we commercialize any of our product candidates, these products may become subject to unfavorable third-party coverage and reimbursement policies, healthcare reform initiatives, or pricing regulations, any of which could negatively impact our business.

Our ability to commercialize any products successfully will depend in part on the extent to which coverage and adequate reimbursement for these products will be available from government authorities (such as Medicare and Medicaid), private health insurers, health maintenance organizations and other entities. These third-party payors determine which medications they will cover and establish reimbursement levels, and increasingly attempt to control costs by limiting coverage and the amount of reimbursement for particular medications. Several third-party payors are requiring that drug companies provide them with predetermined discounts from list prices, are using preferred drug lists to leverage greater discounts in competitive classes and are challenging the prices charged for drugs. In addition, federal programs impose penalties on drug manufacturers in the form of mandatory additional rebates and/or discounts if commercial prices increase at a rate greater than the Consumer Price Index-Urban, and these rebates and/or discounts, which can be substantial, may impact our ability to raise

commercial prices. We cannot be sure that coverage and reimbursement will be available for any product that we commercialize and, if coverage is available, what the level of reimbursement will be. Coverage and reimbursement may impact the demand for, or the price of, any product candidate for which we obtain marketing approval. If coverage and reimbursement are not available or available only to limited levels, we may not successfully commercialize any product candidate for which we obtain marketing approval.

There may be significant delays in obtaining coverage and reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA or comparable foreign regulatory authorities. Moreover, eligibility for coverage and reimbursement does not imply that a drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim reimbursement levels for new drugs, if applicable, may also not be sufficient to cover our costs and may only be temporary. Reimbursement rates for a drug may vary according to the clinical setting in which it is used, and may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. Prices paid for a drug also vary depending on the class of trade. Prices charged to government customers are subject to price controls and private institutions obtain discounts through group purchasing organizations. Net prices for drugs may be further reduced by mandatory discounts or rebates required by government healthcare programs and demanded by private payors, and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Our inability to promptly obtain coverage and profitable reimbursement rates from both government-funded and private payors for any approved products that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

Moreover, the regulations that govern marketing approvals, pricing, coverage and reimbursement for new drug products vary widely from country to country. Current and future legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain marketing approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product, possibly for lengthy time periods, which could negatively impact the revenues we generate from the sale of the product in that particular country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates even if our product candidates obtain marketing approval.

Our failure to successfully in-license, acquire, develop and market additional product candidates or approved products would impair our ability to grow our business.

We intend to in-license, acquire, develop and/or market additional neuropsychiatric products and product candidates, as well as other products and product candidates that address nervous system disorders. Because our internal research and development capabilities are limited, we may be dependent upon pharmaceutical and biotechnology companies, academic scientists and other researchers to sell or license products or technology to us. The success of this strategy depends partly upon our ability to identify and select promising pharmaceutical product candidates and products, negotiate licensing or acquisition agreements with their current owners and finance these arrangements.

The process of proposing, negotiating and implementing a license or acquisition of a product candidate or approved product is lengthy and complex. Other companies, including some with substantially greater financial, marketing, sales and other resources, may compete with us for the license or acquisition of product candidates and approved products. In addition, companies that

perceive us to be a competitor may be unwilling to assign or license rights to us. We have limited resources to identify and execute the acquisition or in-licensing of third-party products, businesses and technologies and integrate them into our current infrastructure. Moreover, we may devote resources to potential acquisitions or licensing opportunities that are never completed, or we may fail to realize the anticipated benefits of such efforts. We may not be able to acquire the rights to additional product candidates on terms that we find acceptable, or at all.

Further, any product candidate that we acquire may require additional development efforts prior to commercial sale, including preclinical or clinical testing and approval by the FDA and applicable foreign regulatory authorities. All product candidates are prone to risks of failure typical of pharmaceutical product development, including the possibility that a product candidate will not be shown to be sufficiently safe and effective for approval by regulatory authorities. In addition, we cannot provide assurance that any approved products that we acquire will be manufactured or sold profitably or achieve market acceptance.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we may forego or delay pursuit of opportunities with other product candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

Recently enacted and future legislation may increase the difficulty and cost for us to commercialize our product candidates and affect the prices we may obtain.

The United States and many foreign jurisdictions have enacted or proposed legislative and regulatory changes affecting the healthcare system and pharmaceutical industry that could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidate for which we obtain marketing approval.

In the United States, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or Medicare Modernization Act, changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for outpatient prescription drug purchases through pharmacies, by the elderly by establishing Medicare Part D and introduced a new reimbursement methodology based on average sales prices for physician-administered drugs under Medicare Part B. In addition, this legislation provided authority for limiting the number of drugs that Medicare will cover in any therapeutic class under the new Medicare Part D program. Cost reduction initiatives and other provisions of this legislation could decrease the coverage and reimbursement rate that we receive for any of our approved products. While the Medicare Modernization Act applies only to drug benefits for Medicare beneficiaries, the Medicare and Medicaid programs increasingly are used as models for how private payors and other governmental payors develop their coverage and reimbursement policies for drugs and other medical products and services, particularly for new and innovative products and therapies, which has resulted in lower average selling prices. Therefore, any reduction in reimbursement that results from healthcare reform impacting government programs may result in a similar reduction in payments from private payors.

In March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or, collectively, the Affordable Care Act, a law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against healthcare fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on pharmaceutical and medical device manufacturers and impose additional health policy reforms. Among other things, the Affordable Care Act:

- expanded manufacturers' rebate liability under the Medicaid Drug Rebate Program by increasing the minimum rebate for both branded and generic drugs, effective the first quarter of 2010;
- revised the definition of "average manufacturer price," or AMP, for reporting purposes, which can increase the amount of Medicaid drug rebates manufacturers are required to pay to states, and created a separate AMP for certain categories of drugs provided in non-retail outpatient settings;
- extended Medicaid drug rebates, previously due only on fee-for-service utilization, to Medicaid managed care utilization;
- created an alternative rebate formula for certain new formulations of certain existing products that is intended to increase the amount of rebates due on those drugs;
- expanded the types of entities eligible to receive discounted 340B pricing, although, with the exception of children's hospitals, these newly eligible entities will not be eligible to receive discounted 340B pricing on orphan drugs. In addition, because 340B pricing is determined based on AMP and Medicaid drug rebate data, the revisions to the Medicaid rebate formula and AMP definition described above can cause the required 340B discounts to increase;
- imposed a significant annual fee on companies that manufacture or import branded prescription drug products;
- required manufacturers to provide a 50% discount off the negotiated price of prescriptions filled by beneficiaries in the Medicare Part D coverage gap, referred to as the "donut hole"; and
- enacted substantial new provisions affecting compliance which may affect our business practices with healthcare practitioners.

Although it is too early to determine the full effect of the Affordable Care Act, the new law appears likely to continue the downward pressure on pharmaceutical pricing, especially under the Medicare program, and may also increase our regulatory burdens and operating costs.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. For example, in August 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least $1.2 trillion for fiscal years 2012 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013.

We expect that the Affordable Care Act, as well as other state and federal healthcare reform measures that have and may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved product, and could seriously harm our future revenues. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The

implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our products.

Moreover, the recently enacted Drug Quality and Security Act imposes new obligations on manufacturers of pharmaceutical products related to product tracking and tracing. Among the requirements of this new legislation, manufacturers will be required to provide certain information regarding drug products to individuals and entities to which product ownership is transferred, label drug products with a product identifier, and keep certain records regarding drug products. The transfer of information to subsequent product owners by manufacturers will eventually be required to be done electronically. Manufacturers will also be required to verify that purchasers of the manufacturers' products are appropriately licensed. Further, under this new legislation, manufacturers will have drug product investigation, quarantine, disposition, and FDA and trading partner notification responsibilities related to counterfeit, diverted, stolen, and intentionally adulterated products such that they would result in serious adverse health consequences or death, as well as products that are the subject of fraudulent transactions or which are otherwise unfit for distribution such that they would be reasonably likely to result in serious health consequences or death.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products that we may develop. Product liability claims may be brought against us by subjects enrolled in our clinical trials, patients, healthcare providers or others using, administering or selling our products. For example, we may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability and a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against claims that our product candidates or products that we may develop caused injuries, we could incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- termination of clinical trial sites or entire trial programs;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards to trial subjects or patients;
- loss of revenue;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- diversion of management and scientific resources from our business operations;
- the inability to commercialize any products that we may develop; and
- a decline in our stock price.

We currently hold $10.0 million in clinical trial liability insurance coverage, which may not adequately cover all liabilities that we may incur. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise. We intend to expand our insurance coverage for products to include the sale of commercial products if we obtain

marketing approval for our product candidates in development, but we may be unable to obtain commercially reasonable product liability insurance for any products approved for marketing. Large judgments have been awarded in class action lawsuits based on drugs that had unanticipated side effects. A successful product liability claim or series of claims brought against us, particularly if judgments exceed our insurance coverage, could decrease our cash and adversely affect our business.

Our relationships with commercial and government customers, healthcare providers, and third-party payors and others will be subject to applicable anti-kickback, fraud and abuse, transparency and other healthcare related laws, regulations and requirements, which could expose us to criminal sanctions, civil penalties, exclusion from participation in federal healthcare programs, contractual damages and consequences, reputational harm, administrative burdens and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute our products for which we obtain marketing approval. There are also laws, regulations, and requirements applicable to the award and performance of federal grants and contracts. Actions resulting in violations of these laws regulations, and requirements may result in civil and criminal liability, damages and restitution, as well as exclusion from participation in federal healthcare programs, corporate integrity agreements, deferred prosecution agreements, debarment from government contracts and grants and refusal of future orders under existing contracts or contractual damages, and other consequences. Restrictions under applicable federal and state healthcare related laws and regulations, include the following:

- the federal Anti-Kickback Statute prohibits persons from, among other things, knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, the referral of an individual for the furnishing or arranging for the furnishing, or the purchase, lease or order, or arranging for or recommending purchase, lease or order, of any good or service for which payment may be made under a federal healthcare program such as Medicare and Medicaid;

- the civil federal False Claims Act imposes civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent; knowingly making, using or causing to be made or used, a false record or statement to get a false or fraudulent claim paid or approved by the government; conspiring to defraud the government by getting a false or fraudulent claim paid or approved by the government; or knowingly making, using or causing to be made or used a false record or statement to avoid, decrease or conceal an obligation to pay money to the federal government. Civil False Claims Act liability may be imposed for Medicare or Medicaid overpayments, for example, overpayments caused by understated rebate amounts, that are not refunded within 60 days of discovering the overpayment, even if the overpayment was not cause by a false or fraudulent act;

- the criminal federal False Claims Act imposes criminal fines or imprisonment against individuals or entities who willfully make or present a claim to the government knowing such claim to be false, fictitious or fraudulent;

- the Veterans Health Care Act requires manufacturers of covered drugs to offer them for sale on the Federal Supply Schedule, which requires compliance with applicable federal procurement laws and regulations and subjects us to contractual remedies as well as administrative, civil and criminal sanctions;

- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal liability for, among other actions, knowingly and willfully executing a scheme to defraud any healthcare benefit program, knowingly and willfully embezzling or stealing from a health care benefit program, willfully obstructing a criminal investigation of a health care offense, or knowingly and willfully making false statements relating to healthcare matters;

- 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, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and its implementing regulations, also imposes obligations on certain covered entity health care providers, health plans, and health care clearinghouses as well as their business associates that perform certain services involving individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information, as well as directly applicable privacy and security standards and requirements;

- the federal Physician Sunshine Act, created under Section 6002 of the Affordable Care Act and its implementing regulations, requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the Centers for Medicare and Medicaid Services, or CMS, information related to payments or other "transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, and requires applicable manufacturers and applicable group purchasing organizations to report annually to CMS ownership and investment interests held by physicians (as defined above) and their immediate family members;

- the Foreign Corrupt Practices Act, or FCPA, prohibits any United States individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations; and

- analogous or similar state, federal, and foreign laws, regulations, and requirements such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state and foreign laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state and foreign laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; laws, regulations, and requirements applicable to the award and performance of federal contracts and grants and state, federal and foreign laws that govern the privacy and security of health and other information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. For example, we must ensure that all applicable price concessions are included in prices calculated and reported to federal agencies. Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. In addition, recent health care reform legislation has strengthened these laws. For example, the Affordable Care Act, among other things, amends the intent requirement of the federal anti-kickback and certain portions of the HIPAA criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it. Moreover, the Affordable Care Act provides that the government may assert that a claim including items or services resulting from a violation of the federal anti-kickback statute constitutes a false or fraudulent claim for purposes of the False Claims Act.

If our operations are found to be in violation of any of these laws or any other governmental regulations or requirements that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, restitution exclusion from government funded healthcare programs, such as Medicare and Medicaid, corporate integrity agreements, deferred prosecution agreements, debarment from government contracts and grants and refusal of future orders under existing contracts, contractual damages, the curtailment or restructuring of our operations and other consequences. If any of the physicians or other healthcare providers or entities with whom we expect to do business are found not to be in compliance with applicable laws, that person or entity may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. Moreover, availability of any federal grant funds which we may receive or for which we may apply is subject to federal appropriations law. Grant funding may also be withdrawn or denied for other reasons. For instance, the National Institutes of Mental Health, or NIMH, recently decided to discontinue the funding of a Phase 1 study of CERC-501 that was to be conducted by a third party as NIMH decided the study would be unlikely to provide new information beyond what a NIMH funded Phase 2a study, conducted by the same third party, would provide.

If we fail to attract and keep management and other key personnel, as well as our board members, we may be unable to develop our product candidates or otherwise implement our business plan.

Our ability to compete in the highly competitive biotechnology and pharmaceuticals industries depends upon our ability to attract and retain highly qualified managerial, scientific, medical and other personnel. We are highly dependent on Blake M. Paterson, M.D., our Chief Executive Officer and President and member of our board of directors. The loss of the services of Dr. Paterson could impede, delay or prevent the development of our product candidates and could negatively impact our ability to successfully implement our business plan. If we lose the services of Dr. Paterson, we may not be able to find a suitable replacement on a timely basis, or at all, and our business would likely be harmed as a result. We do not maintain a "key man" insurance policy on Dr. Paterson's life or the lives of any of our other employees. We employ all of our executive officers and key personnel on an at-will basis and their employment can be terminated by us or them at any time, for any reason and without notice. In order to retain valuable employees at our company, in addition to salary and cash incentives, we provide incentive stock options that vest over time. The value to employees of stock options that vest over time will be significantly affected by movements in our stock price that are beyond our control and may at any time be insufficient to counteract offers from other companies.

We may not be able to attract or retain qualified management and other key personnel in the future due to the intense competition for qualified personnel among biotechnology, pharmaceutical and other businesses. Our industry has experienced a high rate of turnover of management personnel in recent years. As such, we could have difficulty attracting experienced personnel to our company and may be required to expend significant financial resources in our employee recruitment and retention efforts. Many of the other biotechnology and pharmaceutical companies with whom we compete for qualified personnel have greater financial and other resources, different risk profiles and longer histories in the industry than we do. They also may provide more diverse opportunities and better chances for career advancement. Some of these characteristics may be more appealing to high quality candidates than that which we have to offer. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience constraints that will impede significantly our ability to implement our business strategy and achieve our business objectives.

In addition, we have scientific and clinical advisors who assist us in formulating our development and clinical strategies. These advisors are not our employees and may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. In addition, our advisors may have arrangements with other companies to assist those companies in developing products or technologies that may compete with ours.

If our employees, independent contractors, principal investigators, CROs, manufacturers, consultants or vendors commit fraud or other misconduct, including noncompliance with regulatory standards and requirements and insider trading, our business may experience serious adverse consequences.

We are exposed to the risk that our employees, independent contractors, principal investigators, CROs, manufacturers, consultants and vendors may engage in fraudulent or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violates: (1) FDA regulations, including those laws requiring the reporting of true, complete and accurate information to the FDA, (2) manufacturing standards, (3) federal and state healthcare fraud and abuse laws and regulations or (4) laws that require the true, complete and accurate reporting of financial information or data. Specifically, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. The improper use of information obtained in the course of clinical trials could also result in significant legal sanctions and serious harm to our reputation. In addition, federal procurement laws and regulations impose substantial penalties for misconduct in connection with government contracts and require contractors to maintain a code of business conduct and ethics. In contemplation of this offering, we will adopt a Code of Business Conduct and Ethics, but it is not always possible to identify and deter misconduct by our employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including regulatory enforcement action, the imposition of significant criminal and civil fines, penalties, or other sanctions, including imprisonment, exclusion from participation in federal healthcare programs, and deferred prosecution and corporate integrity agreements.

In addition, during the course of our operations, our directors, executives and employees may have access to material, nonpublic information regarding our business, our results of operations or potential transactions we are considering. In contemplation of this offering, we will adopt an Insider Trading Policy, but despite the adoption of such policy, we may not be able to prevent a director, executive or employee from trading in our common stock on the basis of, or while having access to, material,

nonpublic information. If a director, executive or employee was to be investigated, or an action was to be brought against a director, executive or employee for insider trading, it could have a negative impact on our reputation and our stock price. Such a claim, with or without merit, could also result in substantial expenditures of time and money, and divert attention of our management team from other tasks important to the success of our business.

We may encounter difficulties in managing our growth and expanding our operations successfully.

As we seek to advance our product candidates through clinical trials, we will need to expand our development, regulatory, manufacturing, administrative, marketing and sales capabilities or contract with third parties to provide these capabilities for us. As our operations expand, we expect that we will need to manage additional relationships with various strategic partners, suppliers and other third parties. Future growth will impose significant added responsibilities on members of management. Our future financial performance and our ability to commercialize our product candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we must be able to manage our development efforts and clinical trials effectively and hire, train and integrate additional management, administrative and sales and marketing personnel. The hiring, training and integration of new employees may be more difficult, costly and/or time-consuming for us because we have fewer resources than a larger organization. We may not be able to accomplish these tasks, and our failure to accomplish any of them could prevent us from successfully growing our company.

If, in the future, we are unable to establish our own sales, marketing and distribution capabilities or enter into licensing or collaboration agreements for these purposes, we may not be successful in commercializing our product candidates.

We currently have a relatively small number of employees and do not have a sales or marketing infrastructure, and we do not have any significant sales, marketing or distribution experience. We will be opportunistic in seeking to either build our own commercial infrastructure to commercialize our product candidates and future products if and when they are approved, or enter into licensing or collaboration agreements to assist in the future development and commercialization of such products.

To develop internal sales, distribution and marketing capabilities, we will have to invest significant amounts of financial and management resources, some of which will be committed prior to any confirmation that our product candidates will be approved. For product candidates for which we decide to perform sales, marketing and distribution functions ourselves, we could face a number of additional risks, including:

- our inability to recruit and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or educate adequate numbers of physicians on the clinical benefits of our products to achieve market acceptance;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines;
- the costs associated with training sales personnel on legal compliance matters and monitoring their actions;
- liability for sales personnel failing to comply with the applicable legal requirements; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

Where and when appropriate, we may elect to utilize contract sales forces or strategic partners to assist in the commercialization of our product candidates. If we enter into arrangements with third

parties to perform sales, marketing and distribution services for our products, the resulting revenues or the profitability from these revenues to us are likely to be lower than if we had sold, marketed and distributed our products ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell, market and distribute our product candidates or may be unable to do so on terms that are favorable to us. We likely will have little control over such third parties, and any of these third parties may fail to devote the necessary resources and attention to sell, market and distribute our products effectively. Such third parties may also not comply with the applicable regulatory requirements, which could potentially expose us to regulatory and legal enforcement actions.

If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

Risks Related to Our Dependence on Third Parties

We may not succeed in establishing and maintaining development collaborations, which could adversely affect our ability to develop and commercialize product candidates.

A part of our strategy is to enter into product development collaborations in the future, including collaborations with major biotechnology or pharmaceutical companies for the development or commercialization of our current and future product candidates. We face significant competition in seeking appropriate development partners and the negotiation process is time-consuming and complex. We may not succeed in our efforts to establish development collaborations or other alternative arrangements for any of our existing or future product candidates and programs because our research and development pipeline may be insufficient, our product candidates and programs may be deemed to be at too early a stage of development for collaborative effort and/or third parties may not view our product candidates and programs as having the requisite potential to demonstrate safety and efficacy.

Furthermore, any collaborations that we enter into may not be successful. The success of our development collaborations will depend heavily on the efforts and activities of our collaborators. Collaborators generally have significant discretion in determining the efforts and resources that they will apply to these collaborations. Disagreements between parties to a development collaboration regarding clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable product candidate and, in some cases, termination of the development collaboration. These disagreements can be difficult to resolve if neither of the parties has final decision making authority.

Even if we are successful in our efforts to establish development collaborations, the terms that we agree upon may not be favorable to us and we may not be able to maintain such development collaborations if, for example, development or approval of a product candidate is delayed or sales of an approved product candidate are disappointing. Any delay in entering into development collaboration agreements related to our product candidates could delay the development and commercialization of our product candidates and reduce their competitiveness if they reach the market. Additionally, collaborations with pharmaceutical or biotechnology companies and other third parties often are terminated or allowed to expire by the other party. Any such termination or expiration would adversely affect us financially and could harm our business reputation.

If we fail to establish and maintain additional development collaborations related to our product candidates:

- the development of certain of our current or future product candidates may be terminated or delayed;

- our cash expenditures related to development of certain of our current or future product candidates would increase significantly and we may need to seek additional financing, which may not be available on favorable terms, or at all;
- we may be required to hire additional employees or otherwise develop expertise, such as sales and marketing expertise, for which we have not budgeted;
- we will bear all of the risk related to the development of any such product candidates;
- we may have to expend unexpected efforts and funds if we are unable to obtain the results of third party clinical trials; and
- the competitiveness of any product candidate that is commercialized could be reduced.

We rely on third parties to conduct, supervise and monitor our clinical trials. The failure of these third parties to successfully carry out their contractual duties or meet expected deadlines could substantially harm our business because we may not obtain marketing approval for or commercialize our product candidates in a timely manner or at all.

We rely upon third-party CROs to monitor and manage data for our clinical programs. We rely on these parties for execution of our clinical trials and, while we have agreements governing their activities, we have limited influence over their actual performance and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on the CROs does not relieve us of our regulatory responsibilities. We, our clinical trial sites, and our CROs are required to comply with GCP requirements, which are regulations and guidelines enforced by the FDA, the Competent Authorities of the Member States of the European Economic Area and comparable foreign regulatory authorities for all of our products in clinical development. Regulatory authorities enforce these GCP requirements through periodic inspections of trial sponsors, principal investigators and trial sites. If we, any of our CROs or clinical trial sites fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications, if at all. In addition, we are required to report certain financial interests of our third-party investigators if these relationships exceed certain financial thresholds or meet other criteria. The FDA or comparable foreign regulatory authorities may question the integrity of the data from those clinical trials conducted by principal investigators who previously served or currently serve as scientific advisors or consultants to us from time to time and receive cash compensation in connection with such services or otherwise receive compensation from us that could be deemed to impact study outcome, proprietary interests in a product candidate, certain company equity interests, or significant payments of other sorts. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials complies with GCP requirements. In addition, we must conduct our clinical trials with product produced under applicable GMP requirements. Failure to comply with these regulations may require us to repeat preclinical and clinical trials, which would delay the marketing approval process.

Our CROs and clinical trial sites are not our employees, and, except for remedies available to us under our agreements with such CROs and clinical trial sites, we cannot control whether or not they devote sufficient time and resources to our ongoing clinical, nonclinical and preclinical programs. These CROs and clinical trial sites may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other drug development activities that could harm our competitive position. If CROs or clinical trial sites do not successfully carry out their contractual duties or obligations or meet expected deadlines, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated

and we may not be able to obtain marketing approval for or successfully commercialize our product candidates or we may be subject to regulatory enforcement actions. As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed. To the extent we are unable to successfully identify and manage the performance of third-party service providers in the future, our business may be adversely affected.

Switching or adding CROs involves substantial cost and requires extensive management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we carefully manage our relationships with our CROs, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, prospects, financial condition and results of operations.

We use third parties to manufacture all of our product candidates. This may increase the risk that we will not have sufficient quantities of our product candidates to conduct our clinical trials or such quantities at an acceptable cost, which could result in the delay, prevention, or impairment of clinical development and commercialization of our product candidates.

We do not own or operate, and have no plans to establish, any manufacturing facilities for our product candidates. We have limited personnel with experience in drug manufacturing and we lack the resources and the capabilities to manufacture any of our product candidates on a clinical or commercial scale.

We currently outsource all manufacturing of our product candidates to third parties typically without any guarantee that there will be sufficient supplies to fulfill our requirements or that we may obtain such supplies on acceptable terms. Any delays in obtaining adequate supplies with respect to our product candidates may delay the development or commercialization of our other product candidates.

In addition, we do not currently have any agreements with third-party manufacturers for the long-term commercial supply of our product candidates. We may be unable to enter agreements for commercial supply with third-party manufacturers, or may be unable to do so on acceptable terms. Even if we enter into these agreements, the various manufacturers of each product candidate will likely be single source suppliers to us for a significant period of time.

The facilities used by our contract manufacturers to manufacture our product candidates must be approved by the FDA pursuant to inspections that will be conducted after we submit our NDA to the FDA. While we are ultimately responsible for the manufacture of our product candidates, other than through our contractual arrangements, we do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with the regulatory requirements, known as GMP requirements, for manufacture of both active drug substances and finished drug products for clinical supply and eventually for commercial supply, if we receive regulatory approval. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or other regulatory authorities, we will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. Failure of our contract manufacturers to comply with the applicable regulatory requirements may also subject us to regulatory enforcement actions. In addition, other than through our contractual agreements, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain marketing approval for or market our product candidates, if approved.

Reliance on third-party manufacturers subjects us to risks that would not affect us if we manufactured the product candidates ourselves, including:

- reliance on the third parties for regulatory compliance and quality assurance;
- the possible breach of the manufacturing agreements by the third parties because of factors beyond our control;
- the possibility of termination or nonrenewal of the agreements by the third parties because of our breach of the manufacturing agreement or based on their own business priorities; and
- the disruption and costs associated with changing suppliers, including additional regulatory filings.

Our product candidates may compete with other products and product candidates for access to manufacturing facilities. There are a limited number of manufacturers that operate under GMP regulations and that are both capable of manufacturing for us and willing to do so. If our existing third-party manufacturers, or the third parties that we engage in the future to manufacture a product for commercial sale or for our clinical trials, should cease to continue to do so for any reason, we likely would experience delays in obtaining sufficient quantities of our product candidates for us to meet commercial demand or to advance our clinical trials while we identify and qualify replacement suppliers. If for any reason we are unable to obtain adequate supplies of our product candidates or the drug substances used to manufacture them, it will be more difficult for us to develop our product candidates and compete effectively.

Our suppliers are subject to regulatory requirements, covering manufacturing, testing, quality control, manufacturing, and record keeping relating to our product candidates, and subject to ongoing inspections by the regulatory agencies. Failure by any of our suppliers to comply with applicable regulations may result in long delays and interruptions to our manufacturing capacity while we seek to secure another supplier that meets all regulatory requirements, as well as market disruption related to any necessary recalls or other corrective actions.

Risks Related to Intellectual Property

If we are unable to obtain or maintain intellectual property rights, or if the scope of patent protection is not sufficiently broad, competitors could develop and commercialize products similar or identical to ours, and we may not be able to compete effectively in our market.

Our success depends in significant part on our and our licensors', licensees' or collaborators' ability to establish, maintain and protect patents and other intellectual property rights and operate without infringing the intellectual property rights of others. We have filed numerous patent applications both in the United States and in foreign jurisdictions to obtain patent rights to inventions we have discovered. We have also licensed from third parties rights to patent portfolios.

The patent prosecution process is expensive and time-consuming, and we and our current or future licensors, licensees or collaborators may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we or our licensors, licensees or collaborators will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from or license to third parties and are reliant on our licensors, licensees or collaborators. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. If our current or future licensors, licensees or collaborators fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If our licensors, licensees or collaborators are not fully cooperative or disagree

with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our and our current or future licensors', licensees' or collaborators' patent rights are highly uncertain. Our and our licensors', licensees' or collaborators' pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. The patent examination process may require us or our licensors, licensees or collaborators to narrow the scope of the claims of our or our licensors', licensees' or collaborators' pending and future patent applications, which may limit the scope of patent protection that may be obtained. Our and our licensors', licensees' or collaborators' patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications, and then only to the extent the issued claims cover the technology.

Furthermore, given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. We expect to seek extensions of patent terms where these are available in any countries where we are prosecuting patents. This includes in the United States under the Drug Price Competition and Patent Term Restoration Act of 1984, which permits a patent term extension of up to five years beyond the expiration of the patent. However the applicable authorities, including the FDA in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case.

If we breach the license agreements related to our product candidates, we could lose the ability to develop and commercialize our product candidates.

Our commercial success depends upon our ability, and the ability of our licensors and collaborators, to develop, manufacture, market and sell our product candidates and use our and our licensors' or collaborators' proprietary technologies without infringing the proprietary rights of third parties. If we fail to comply with our obligations in the agreements under which we license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose the ability to continue the development and commercialization of our product candidates or face other penalties under these agreements. We have entered into exclusive license agreements with Merck & Co., Inc. and its affiliates, or Merck, pursuant to which Merck has granted us rights to the compounds used in CERC-301 and the COMTi platform, including CERC-406. We have also entered into exclusive license agreements with Lilly pursuant to which Lilly has granted us rights to the compounds used in CERC-501. If we fail to comply with the obligations under these agreements, including payment terms, Merck and Lilly may have the right to terminate any of these agreements, in which event we may not be able to develop, market or sell CERC-301, CERC-501 or any product candidate developed from the COMTi platform, including CERC-406. Such an occurrence could materially adversely affect the value of the product candidate being developed under any such agreement. Termination of these agreements or reduction or elimination of our rights under these agreements may result in our having to negotiate new or reinstated agreements, which may not be available to us on equally favorable terms, or at all, or cause us to lose our rights under these agreements, including our rights to intellectual property or technology important to our development programs. Any of these occurrences may harm our business, financial condition and prospects significantly.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance and annuity fees on any issued patent are due to be paid to the United States Patent and Trademark Office, or USPTO, and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we or our licensors or collaborators fail to maintain the patents and patent applications covering our product candidates, our competitors might be able to enter the market, which would have a material adverse effect on our business.

Third parties may initiate legal proceedings against us alleging that we infringe their intellectual property rights or we may initiate legal proceedings against third parties to challenge the validity or scope of intellectual property rights controlled by third parties, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Third parties may initiate legal proceedings against us or our licensors or collaborators alleging that we or our licensors or collaborators infringe their intellectual property rights or we or our licensors or collaborators may initiate legal proceedings against third parties to challenge the validity or scope of intellectual property rights controlled by third parties, including in oppositions, interferences, reexaminations, inter partes reviews or derivation proceedings before the United States or other jurisdictions. These proceedings can be expensive and time-consuming and many of our or our licensors' or collaborators' adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we or our licensors or collaborators can.

An unfavorable outcome could require us or our licensors or collaborators to cease using the related technology or developing or commercializing our product candidates, or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us or our licensors or collaborators a license on commercially reasonable terms or at all. Even if we or our licensors or collaborators obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us or our licensors or collaborators. 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 product candidates or force us to cease some of our business operations, which could materially harm our business.

We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time-consuming and unsuccessful and have a material adverse effect on the success of our business.

Third parties may infringe our or our licensors' or collaborators' patents or misappropriate or otherwise violate our or our licensors' or collaborators' intellectual property rights. In the future, we or our licensors or collaborators may initiate legal proceedings to enforce or defend our or our licensors' or collaborators' intellectual property rights, to protect our or our licensors' or collaborators' trade secrets or to determine the validity or scope of intellectual property rights we own or control. Also, third parties may initiate legal proceedings against us or our licensors or collaborators to challenge the

validity or scope of intellectual property rights we own or control. The proceedings can be expensive and time-consuming and many of our or our licensors' or collaborators' adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we or our licensors or collaborators can. Accordingly, despite our or our licensors' or collaborators' efforts, we or our licensors or collaborators may not prevent third parties from infringing upon or misappropriating intellectual property rights we own or control, particularly in countries where the laws may not protect those rights as fully as in the United States. Litigation could result in substantial costs and diversion of management resources, which could harm our business and financial results. In addition, in an infringement proceeding, a court may decide that a patent owned by or licensed to us is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our or our licensors' or collaborators' patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our or our licensors' or collaborators' patents at risk of being invalidated, held unenforceable or interpreted narrowly.

Third party preissuance submission of prior art to the USPTO, or opposition, derivation, reexamination, inter partes review or interference proceedings, or other preissuance or post-grant proceedings in the United States or other jurisdictions provoked by third parties or brought by us or our licensors or collaborators may be necessary to determine the priority of inventions with respect to our or our licensors' or collaborators' patents or patent applications. An unfavorable outcome could require us or our licensors or collaborators to cease using the related technology and commercializing our product candidates, or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us or our licensors or collaborators a license on commercially reasonable terms or at all. Even if we or our licensors or collaborators obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us or our licensors or collaborators. In addition, if the breadth or strength of protection provided by our or our licensors' or collaborators' patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates. Even if we successfully defend such litigation or proceeding, we may incur substantial costs and it may distract our management and other employees. We could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent.

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 during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of shares of our common stock.

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.

Many of our employees, including our senior management, were previously employed at universities or at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Some of these employees executed proprietary rights, non-disclosure and non-competition agreements in connection with such previous employment. We may be subject to claims that we or these employees have used or disclosed confidential information or intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. In addition, we may be subject to claims that former employees, collaborators, or other third parties have an ownership interest in our patents or other intellectual property. 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 to each party who in fact develops intellectual property that we regard as our own. We could be subject to ownership disputes arising, for example, from conflicting obligations of consultants or others who are involved in developing our product candidates. Litigation may be necessary to defend against these claims.

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 or sustain damages. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products. Such a license may not be available on commercially reasonable terms or at all. Even if we successfully prosecute or defend against such claims, litigation could result in substantial costs and distract management.

Our inability to protect our confidential information and trade secrets would harm our business and competitive position.

In addition to seeking patents for some of our technology and products, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. Though we seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties, as well as by entering into confidentiality and invention or patent assignment agreements with our employees and consultants, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts both within and outside the United States may be less willing or unwilling to protect trade secrets. If a competitor lawfully obtained or independently developed any of our trade secrets, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position.

Changes in patent law could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.

As is the case with other biotechnology and pharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve technological and legal complexity, and obtaining and enforcing biopharmaceutical patents is costly, time-consuming, and inherently uncertain. The Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our and our licensors' or collaborators' ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by Congress, the federal courts, and the USPTO the laws and regulations governing patents could change in unpredictable ways that would weaken our and our licensors' or collaborators' ability to obtain new patents or to enforce existing patents and patents we and our licensors or collaborators may obtain in the future. Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our and our licensors' or collaborators' patent applications and the enforcement or defense of our or our licensors' or collaborators' 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 United States patent law. These include provisions that affect the way patent applications are prosecuted and may also affect patent litigation. The USPTO 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 or our licensors' or collaborators' patent applications and the enforcement or defense of our or our licensors' or collaborators' issued patents, all of which could have a material adverse effect on our business and financial condition.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, enforcing and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our or our licensors' or collaborators' intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we and our licensors or collaborators may not be able to prevent third parties from practicing our and our licensors' or collaborators' inventions in all countries outside the United States, or from selling or importing products made using our and our licensors' or collaborators' inventions in and into the United States or other jurisdictions. Competitors may use our and our licensors' or collaborators' technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we and our licensors or collaborators have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our product candidates and our and our licensors' or collaborators' patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

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

The requirements for patentability may differ in certain countries, particularly developing countries. For example, unlike other countries, China has a heightened requirement for patentability, and specifically requires a detailed description of medical uses of a claimed drug. In India, unlike the United States, there is no link between regulatory approval of a drug and its patent status. Furthermore, generic or biosimilar drug manufacturers or other competitors may challenge the scope, validity or enforceability of our or our licensors' or collaborators' patents, requiring us or our licensors or collaborators to engage in complex, lengthy and costly litigation or other proceedings. Generic or biosimilar drug manufacturers may develop, seek approval for, and launch biosimilar versions of our products. In addition to India, certain countries in Europe and developing countries, including China, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third

parties. In those countries, we and our licensors or collaborators may have limited remedies if patents are infringed or if we or our licensors or collaborators are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our and our licensors' or collaborators' efforts to enforce intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license.

Risks Related to this Offering and Ownership of Our Common Stock

We do not know whether an active, liquid and orderly trading market will develop for our common stock or what the market price of our common stock will be and as a result it may be difficult for you to sell your shares of our common stock.

Prior to this offering, no market for shares of our common stock existed and an active trading market for our shares may never develop or be sustained following this offering. We will determine the initial public offering price for our common stock through negotiations with the underwriters, and the negotiated price may not be indicative of the market price of our common stock after this offering. The market value of our common stock may decrease from the initial public offering price. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price, or at all. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of your shares. Furthermore, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic collaborations or acquire companies or products by using our shares of common stock as consideration.

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

The trading price of our common stock following this offering is likely to be highly volatile and subject to wide fluctuations in response to various factors, some of which we cannot control. As a result of this volatility, you may not be able to sell your common stock at or above the initial public offering price, or at all. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this prospectus, these factors include:

- the development status of our product candidates, and when any of our product candidates receive marketing approval;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- our failure to commercialize our product candidates, if approved;
- the success of competitive products or technologies;
- regulatory actions with respect to our products or our competitors' products;
- actual or anticipated changes in our growth rate relative to our competitors;
- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures, collaborations or capital commitments;
- results of preclinical studies and clinical trials of our product candidates or those of our competitors;
- 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 product candidates or clinical development programs;
- the results of our efforts to discover, develop, in-license or acquire additional product candidates or products;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- the performance of third parties on whom we rely to manufacture our products and product candidates, supply API and conduct our clinical trials, including their ability to comply with regulatory requirements;
- variations in our financial results or those of companies that are perceived to be similar to us;
- variations in the level of expenses related to our product candidates or preclinical and clinical development programs, including relating to the timing of invoices from, and other billing practices of, our CROs and clinical trial sites;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders or our other stockholders;
- changes in the structure of healthcare payment systems;
- changes in operating performance and stock market valuations of other pharmaceutical companies;
- market conditions in the pharmaceutical and biotechnology sectors;
- our execution of collaborative, co-promotion, licensing or other arrangements, and the timing of payments we may make or receive under these arrangements;
- the public's response to press releases or other public announcements by us or third parties, including our filings with the Securities and Exchange Commission, or SEC, and announcements relating to litigation or other disputes, strategic transactions or intellectual property impacting us or our business;
- the financial projections we may provide to the public, any changes in these projections or our failure to meet these projections;
- changes in financial estimates by any securities analysts who follow our common stock, our failure to meet these estimates or failure of those analysts to initiate or maintain coverage of our common stock;
- ratings downgrades by any securities analysts who follow our common stock;
- the development and sustainability of an active trading market for our common stock;
- future sales of our common stock by our officers, directors and significant stockholders;
- other events or factors, including those resulting from war, incidents of terrorism, natural disasters or responses to these events;

- changes in accounting principles; and
- general economic, industry and market conditions.

In addition, the stock market in general, and the market for biotechnology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. The realization of any of the above risks or any of a broad range of other risks, including those described in this "Risk Factors" section, could have a dramatic and material adverse impact on the market price of our common stock.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and will be able to avail ourselves of reduced disclosure requirements applicable to emerging growth companies, which could make our common stock less attractive to investors and adversely affect the market price of our common stock.

For so long as we remain an "emerging growth company" as defined in the JOBS Act, we may take advantage of certain exemptions from various requirements applicable to public companies that are not "emerging growth companies" including:

- the provisions of Section 404(b) of the Sarbanes-Oxley Act of 2002, or Sarbanes-Oxley Act, requiring that our independent registered public accounting firm provide an attestation report on the effectiveness of our internal control over financial reporting;
- the "say on pay" provisions (requiring a non-binding shareholder vote to approve compensation of certain executive officers) and the "say on golden parachute" provisions (requiring a non-binding shareholder vote to approve golden parachute arrangements for certain executive officers in connection with mergers and certain other business combinations) of the Dodd-Frank Act and some of the disclosure requirements of the Dodd-Frank Act relating to compensation of our chief executive officer;
- the requirement to provide detailed compensation discussion and analysis in proxy statements and reports filed under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and instead provide a reduced level of disclosure concerning executive compensation; and
- any rules that the Public Company Accounting Oversight Board may adopt requiring mandatory audit firm rotation or a supplement to the auditor's report on the financial statements.

We may take advantage of these exemptions until we are no longer an "emerging growth company." We would cease to be an "emerging growth company" upon the earliest of: (i) the first fiscal year following the fifth anniversary of this offering; (ii) the first fiscal year after our annual gross revenues are $1 billion or more; (iii) the date on which we have, during the previous three-year period, issued more than $1 billion in non-convertible debt securities; or (iv) as of the end of any fiscal year in which the market value of our common stock held by non-affiliates exceeded $700 million as of the end of the second quarter of that fiscal year.

Although we are still evaluating the JOBS Act, we currently intend to take advantage of some, but not all, of the reduced regulatory and reporting requirements that will be available to us so long as we qualify as an "emerging growth company." For example, we have irrevocably elected not to take advantage of the extension of time to comply with new or revised financial accounting standards available under Section 102(b) of the JOBS Act. Our independent registered public accounting firm will not be required to provide an attestation report on the effectiveness of our internal control over financial reporting so long as we qualify as an "emerging growth company," which may increase the risk that material weaknesses or significant deficiencies in our internal control over financial reporting

go undetected. Likewise, so long as we qualify as an "emerging growth company," we may elect not to provide you with certain information, including certain financial information and certain information regarding compensation of our executive officers, that we would otherwise have been required to provide in filings we make with the SEC which may make it more difficult for investors and securities analysts to evaluate our company. Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure requirements, including not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile and may decline.

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

Upon closing of this offering, our executive officers, directors and 5% stockholders and their affiliates will beneficially own approximately 8.8% of our outstanding voting stock. As a result, these stockholders will have significant influence and may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This concentration of ownership could delay or prevent any acquisition of our company on terms that other stockholders may desire.

We have broad discretion in the use of the net proceeds from this offering and may not apply the proceeds in ways that increase the value of your investment.

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 be relying on the judgment of our management regarding the application of these proceeds. We intend to use the net proceeds from this offering for:

- Phase 2 clinical development of CERC-301 and CERC-501;
- research and development under our COMTi platform, including the selection of lead candidates and preclinical research for CERC-406; and
- working capital and other general corporate purposes.

In addition, a portion of the net proceeds may also be used to acquire or license products, technologies or businesses. However, we do not currently have any specific plans for use of the net proceeds from this offering, nor have we performed studies or made preliminary decisions with respect to the best use of the capital resources resulting from this offering. As such, our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not necessarily improve our operating results or enhance the value of our common stock. You will be relying on the judgment of our management concerning these uses and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The failure of our management to apply these funds effectively could result in unfavorable returns and uncertainty about our prospects, each of which could cause the price of our common stock to decline.

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

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

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

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. We do not currently have and may never obtain research coverage by securities and industry analysts. If no securities or industry analysts commence coverage of our company, the trading price for our stock would be negatively impacted. If we obtain securities or industry analyst coverage and if one or more of the analysts who covers us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price would likely decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, demand for our stock could decrease, which could cause our stock price and trading volume to decline.

Future sales of our common stock may depress our stock price.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. After this offering, we will have outstanding 8,860,912 shares of common stock based on the number of shares outstanding as of June 30, 2015, assuming (i) no exercise of the underwriters' over-allotment option; and (ii) the conversion of all outstanding shares of our convertible preferred stock into 3,980,422 shares of common stock immediately prior to the closing of this offering. 4,230,769 shares will be eligible for resale on the public market immediately, and 4,630,143 of the shares may be sold after the expiration of lock-up agreements or other similar contractual commitments restricting the sale of such shares at least 180 days after the date of this prospectus pursuant to Rule 144 or Rule 701 under the Securities Act of 1933, as amended, or the Securities Act, unless held by an affiliate of ours, as more fully described in the section entitled "Shares Eligible for Future Sale."

We also intend to register all shares of common stock that we may issue after this offering under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to the lock-up agreements described above and in the section entitled "Underwriting—Lock-Up Agreements."

If a large number of shares of our common stock or securities convertible into our common stock are sold in the public market after they become eligible for sale, the sales could reduce the trading price of our common stock and impede our ability to raise future capital.

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

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company, and these expenses may increase even more after we are no longer an "emerging growth company." We will be subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Protection Act, as well as rules adopted, and to be adopted, by the SEC, the NASDAQ Capital Market and other applicable securities

rules and regulations imposed on public companies, including the 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, we expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. The increased costs will increase our net loss. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain sufficient coverage. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

We estimate the additional annual cost that we will incur as a result of our public company reporting obligations is $2.0 million. However, because these rules and regulations are often subject to varying interpretations, it is difficult to accurately estimate or predict the amount or timing of these additional costs. Further, the lack of specificity of many of the rules and regulations may result in an application in practice that 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.

If you purchase shares of common stock sold in this offering, you will incur immediate and substantial dilution.

If you purchase shares of common stock in this offering, you will incur immediate and substantial dilution in the pro forma as adjusted amount of $3.97 per share, assuming an initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, because you will pay a price per share that substantially exceeds the book value of our tangible assets after subtracting our liabilities. Moreover, investors who purchase shares of common stock in this offering will contribute approximately 33% of our total funding to date but will own only approximately 48% of our outstanding shares after giving effect to this offering. In addition, you may also experience additional dilution if the underwriters exercise their over-allotment option, upon future equity issuances, including upon conversion of any outstanding debt, or the exercise of stock options to purchase common stock granted to our employees, consultants and directors under our stock option and equity incentive plans. Please see the section entitled "Dilution."

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

We expect that significant additional capital may be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities in more than one transaction, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock, including shares of common stock sold in this offering.

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

Upon the closing of this offering, we will become subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and

communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

Our amended and restated certificate of incorporation that will become effective upon the Closing of this offering will provide that the Court of Chancery of the State of Delaware is the sole and exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation that will become effective upon the Closing of this offering will provide that the Court of Chancery of the State of Delaware is the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the company; (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the company to the company or the company's stockholders; (iii) any action asserting a claim against the company arising pursuant to any provision of the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws, each of which will become effective upon the closing of this offering; or (iv) any action asserting a claim against the company governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

Some provisions of our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would benefit our stockholders and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the closing of this offering, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders, or remove our current management. These provisions include:

- authorizing the issuance of "blank check" preferred stock, the terms of which we may establish and shares of which we may issue without stockholder approval;
- providing for a classified board of directors, with each director serving a staggered three-year term;
- prohibiting cumulative voting in the election of directors, which would otherwise allow for less than a majority of stockholders to elect director candidates;
- prohibiting stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of our stockholders;
- eliminating the ability of stockholders to call a special meeting of stockholders; and

- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings.

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, who are responsible for appointing the members of our management. Because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or the DGCL, which may discourage, delay or prevent someone from acquiring us or merging with us whether or not it is desired by or beneficial to our stockholders. Under the DGCL, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other things, the board of directors has approved the transaction. Any provision of our amended and restated certificate of incorporation or amended and restated bylaws or Delaware law that has the effect of delaying or deterring a change of control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

We have never paid cash dividends on our capital stock, and we do not anticipate paying any cash dividends in the foreseeable future.

The continued operation and expansion of our business will require substantial funding. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. Accordingly, we do not anticipate that we will pay any cash dividends on shares of our common stock for the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend upon results of operations, financial condition, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant. Accordingly, if you purchase shares in this offering, realization of a gain on your investment will depend on the appreciation of the price of our common stock, which may never occur. Investors seeking cash dividends in the foreseeable future should not purchase our common stock.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that reflect our management's beliefs and views with respect to future events and are subject to substantial risks and uncertainties. All statements, other than statements of historical fact, contained in this prospectus, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management, are forward- looking statements. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue" or the negative of those terms and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

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

- our estimates regarding our expenses, future revenues, anticipated capital requirements and our needs for additional financing;
- our ability to advance our product candidates into, and successfully complete, clinical trials and the anticipated timing of such clinical trials;
- the timing of and our ability to obtain and maintain marketing approvals for our product candidates and the anticipated regulatory pathways for our product candidates;
- the rate and degree of market acceptance and clinical utility of our product candidates;
- the size and potential growth of the markets for any of our product candidates and our ability to impact the size of those markets;
- our expectations regarding the potential safety, efficacy or clinical utility of our product candidates, particularly in comparison to our competitors' products and product candidates;
- our commercialization, marketing and manufacturing capabilities and strategy;
- the timing of the initiation, progress and results of preclinical studies and research and development programs;
- market and industry trends;
- our ability to leverage the experience of our management team;
- our expectations with respect to future growth and investments in our infrastructure, and our ability to effectively manage any such growth;
- our intellectual property position;
- our ability to identify additional products or product candidates, including from our COMTi platform, with significant commercial potential that are consistent with our commercial objectives; and
- our anticipated use of the net proceeds from this offering.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements. We operate in a very competitive and rapidly changing environment. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make, and accordingly you should not place undue reliance on our forward-looking statements. We have included important factors in the cautionary statements included in this prospectus, particularly in

the "Risk Factors" section, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement of which this prospectus is a part completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of 4,230,769 shares of our common stock in this offering will be approximately $24.8 million, assuming an initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their over-allotment option in full, we estimate that the net proceeds from this offering will be approximately $26.1 million, assuming an initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

A $1.00 increase or decrease in the assumed initial public offering price of $6.50 per share would increase or decrease the net proceeds from this offering by approximately $3.8 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Similarly, a one million share increase or decrease in the number of shares offered by us would increase or decrease the net proceeds to us by $5.9 million, assuming the initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, remains the same, and after deducting estimated 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 operations, to create a public market for our common stock and to facilitate our future access to the public equity markets. As of June 30, 2015, we had cash and cash equivalents of $6.1 million. We plan to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- approximately $9.0 million to fund the costs of our Phase 2 clinical development of CERC-301;
- approximately $7.0 million to fund the costs of our Phase 2 clinical development of CERC-501;
- approximately $1.5 million to fund research and development, and to advance our pipeline of preclinical lead candidates, under the COMTi platform, including the selection of additional candidates and preclinical research for CERC-406; and
- the remainder for working capital, general corporate purposes and potential in-licensing or other acquisitions.

This expected use of net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, the status of and results from clinical trials for CERC-301 and CERC-501, as well as any collaborations that we may enter into with third parties for our product candidates, and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. We have no current understandings, agreements, commitments or obligations to in-license, acquire or invest in complementary businesses, technologies, products or assets.

Based on our planned use of the net proceeds from this offering and our existing cash and cash equivalents described above, we estimate that such funds will be sufficient to enable us to complete Phase 2 clinical development of CERC-301 and CERC-501, preclinical research for CERC-406, and identify other preclinical lead candidates from our COMTi platform. It is possible that we will not achieve the progress that we expect with respect to CERC-301 and our COMTi platform because the

actual costs and timing of development and marketing approval are difficult to predict and are subject to substantial risks and delays.

Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments and United States government securities.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We intend to retain all of our available funds and future earnings, if any, to finance the growth and development of our business. We do not intend to pay cash dividends to our stockholders in the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of June 30, 2015:

- on an actual basis;
- on a pro forma basis to give effect to (i) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 3,980,422 shares of our common stock upon the closing of this offering and (ii) the reclassification of approximately $1.5 million related to the investor rights obligation and warrant liability from liabilities to permanent equity upon the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of 4,230,769 shares of our common stock in this offering at an assumed initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The information in this table is illustrative only and our capitalization following the closing of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table in conjunction with the information contained in the "Management's Discussion and Analysis of Financial Condition and Results of

Operations" section of this prospectus and with our financial statements and the notes thereto included elsewhere in this prospectus.

	As of June 30, 2015		
	Actual	Pro forma	Pro forma as adjusted
		(in thousands)	
Cash and cash equivalents	$ 6,143	$ 6,143	$ 30,893
Liabilities:			
Term debt (net of debt discount)	$ 7,053	$ 7,053	$ 7,053
Convertible Preferred Stock:			
Series A convertible preferred stock, $0.001 par value; 31,116,391 shares authorized, 31,116,391 shares issued and outstanding, actual; no shares designated, issued or outstanding, pro forma and pro forma as adjusted	10,463	—	—
Series A-1 convertible preferred stock, $0.001 par value; 9,074,511 shares authorized, 9,074,511 shares issued and outstanding, actual; no shares designated, issued or outstanding, pro forma and pro forma as adjusted	3,389	—	—
Series B convertible preferred stock, $0.001 par value; 115,000,000 shares authorized, 58,948,735 shares issued and outstanding, actual; no shares designated, issued or outstanding, pro forma and pro forma as adjusted	14,493	—	—
Total convertible preferred stock	28,345	—	—
Stockholders' (deficit) equity:			
Common stock, $0.001 par value; 230,000,000 shares authorized and 649,721 shares issued and outstanding, actual; 230,000,000 shares authorized and 4,630,143 shares issued and outstanding, pro forma; 200,000,000 shares authorized and 8,860,912 shares issued and outstanding, pro forma as adjusted	1	5	9
Preferred stock, par value $0.001; no shares authorized, issued and outstanding, actual and pro forma; 5,000,000 shares authorized, no shares issued and outstanding, pro forma as adjusted	—	—	—
Additional paid in capital	17,034	46,895	71,641
Accumulated deficit	(49,224)	(49,224)	(49,224)
Total stockholders' (deficit) equity	(32,189)	(2,324)	22,426
Total capitalization	$ 3,209	$ 4,729	$ 29,479

A $1.00 increase or decrease in the assumed initial public offering price of $6.50 per share would increase (decrease) each of the pro forma as adjusted cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by approximately $3.8 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1.0 million shares in the number of shares offered by us would increase (decrease) each of cash and cash equivalents, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by approximately $5.9 million, assuming that the assumed initial public offering price, which is the midpoint of the price range set forth on the cover

page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The table above does not include:

- 510,884 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2015 at a weighted-average exercise price of $8.88 per share;
- 490,756 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2015 at a weighted-average exercise price of $26.32 per share, which warrants are expected to remain outstanding upon the closing of this offering;
- 166,718 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2015 at a weighted-average exercise price of $8.40 per share, which warrants will expire upon the closing of this offering in accordance with their terms, unless exercised prior thereto;
- 22,328 shares of our common stock issuable upon the exercise of a warrant outstanding as of June 30, 2015 at an exercise price of $8.40 per share, which warrant is exercisable to purchase Series B convertible preferred stock prior to the completion of this offering and which warrant is expected to remain outstanding upon the closing of this offering;
- 84,615 shares of our common stock issuable upon the exercise of the warrants issued in connection with this offering to the Underwriters at an exercise price of $9.75, assuming an initial public offering price of $6.50 per share, which is the midpoint of this price range set forth on the cover page of this prospectus and a total of 4,230,769 shares of our common stock are sold in this offering;
- 254,236 shares of our common stock available for future issuance under our 2011 Stock Incentive Plan as of June 30, 2015, which upon effectiveness of our 2015 Omnibus Incentive Compensation Plan will be available for issuance under our 2015 Omnibus Incentive Compensation Plan; and
- 890,815 shares of our common stock available for future issuance under our 2015 Omnibus Incentive Compensation Plan, which will become effective on the business day immediately preceding the date on which the registration statement is declared effective.

DILUTION

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

The historical net tangible book value of our common stock as of June 30, 2015 was $(3.8) million, or $(5.92) per share of our common stock, based on 649,721 shares of our common stock outstanding as of June 30, 2015.

The pro forma net tangible book value of our common stock as of June 30, 2015 was $(2.3) million, or $(0.50) per share of our common stock, and represents our historical net tangible book deficit as of June 30, 2015 after giving effect to the conversion of all of our outstanding convertible preferred stock into an aggregate of 3,980,422 shares of our common stock.

After giving further effect to the sale of 4,230,769 shares of common stock by us in this offering at an assumed initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us our pro forma as adjusted net tangible book value as of June 30, 2015 would have been $22.4 million, or $2.53 per share. This represents an immediate increase in pro forma as adjusted net tangible book value of $3.03 per share to existing stockholders, and an immediate dilution of $3.97 per share to investors participating in this offering. The table below illustrates this per share dilution.

Investors participating in this offering will incur immediate and substantial dilution. After giving further effect to our issuance and sale of 4,230,769 shares of our common stock in this offering at an assumed initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of June 30, 2015 would have been $22.4 million, or $2.53 per share. This represents an immediate increase in pro forma adjusted net tangible book value of $3.03 per share to existing stockholders and immediate dilution of $3.97 per share to new investors purchasing common stock in this offering. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$ 6.50
Historical net tangible book value per share as of June 30, 2015	(5.92)	
Pro forma increase in net tangible book value (deficit) per share attributable the conversion of outstanding convertible preferred stock	5.42	
Pro forma net tangible book value (deficit) per share before this offering	(0.50)	
Pro forma increase in net tangible book value (deficit) per share attributable to new investors purchasing common stock in this offering	3.03	
Pro forma as adjusted net tangible book value (deficit) per share after this offering	2.53	
Dilution per share to new investors purchasing common stock in this offering		$ 3.97

A $1.00 increase or decrease in the assumed initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) our pro forma as adjusted net tangible book value by $3.8 million or by $0.43 per share and the dilution to new investors in this offering by $3.54 per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We may also increase or decrease the number of shares we are offering. An increase of 1.0 million shares in the number of shares offered by us would increase our pro forma as adjusted net tangible book value (deficit) as of June 30, 2015, by approximately $5.9 million or by $0.34 per share and the dilution per share to new investors purchasing common stock in this offering by $3.63, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Conversely, a decrease of 1.0 million shares in the number of shares offered by us would decrease our pro forma as adjusted net tangible book value (deficit) as of June 30, 2015, by approximately $5.9 million or by $0.42 per share and the dilution per share to new investors purchasing common stock in this offering by $4.39, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their over-allotment option in full, the pro forma as adjusted net tangible book value (deficit) per share after giving effect to this offering would be $2.75 per share, which amount represents an immediate increase in pro forma net tangible book value (deficit) of $0.22 per share of our common stock to existing stockholders and an immediate dilution in net tangible book value (deficit) of $3.75 per share of our common stock to new investors purchasing shares of common stock in this offering.

The following table summarizes, as of June 30, 2015, on a pro forma basis after giving effect to the conversion of outstanding convertible preferred stock, 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 at an assumed initial public offering price of $6.50 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price
	Number	Percentage	Amount	Percentage	Per Share
Existing shareholders	4,630,143	52%	$ 51,100,000	67%	$ 11.04
New investors	4,230,769	48%	24,750,000	33%	5.85
Total	8,860,912	100%	$ 75,850,000	100%	$ 8.56

The number of shares of our common stock outstanding immediately following this offering is based on 649,721 shares of our common stock outstanding as of June 30, 2015 and giving effect to the pro forma conversion of our convertible preferred stock into an aggregate of 3,980,422 shares of our common stock upon the closing of this offering. This number excludes:

- 510,884 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2015 at a weighted-average exercise price of $8.88 per share;
- 490,756 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2015 at a weighted-average exercise price of $26.32 per share, which warrants are expected to remain outstanding upon the closing of this offering;

- 166,718 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2015 at a weighted-average exercise price of $8.40 per share, which warrants will expire upon the closing of this offering in accordance with their terms, unless exercised prior thereto;

- 22,328 shares of common stock issuable upon the exercise of a warrant outstanding as of June 30, 2015 at an exercise price of $8.40 per share, which warrant is exercisable to purchase Series B convertible preferred stock prior to the completion of this offering and which warrant is expected to remain outstanding upon the closing of this offering;

- 84,615 shares of our common stock issuable upon the exercise of the warrants issued in connection with this offering to the Underwriters at an exercise price of $9.75, assuming an initial public offering price of $6.50 per share, which is the midpoint of this price range set forth on the cover page of this prospectus and a total of 4,230,769 shares of our common stock are sold in this offering;

- 254,236 shares of our common stock available for future issuance under our 2011 Stock Incentive Plan as of June 30, 2015, which upon effectiveness of our 2015 Omnibus Incentive Compensation Plan will be available for issuance under our 2015 Omnibus Incentive Compensation Plan; and

- 890,815 shares of our common stock available for future issuance under our 2015 Omnibus Incentive Compensation Plan, which will become effective business day immediately preceding the date on which the registration statement is declared effective.

To the extent that outstanding stock options are subsequently exercised, there will be further dilution to new investors. If all outstanding options as of June 30, 2015 had been exercised, assuming the treasury stock method, the pro forma net tangible book value per share as of June 30, 2015 (calculated on the basis of the assumptions set forth above) would have been approximately $(2.3) million, or $(0.49) per share of our common stock, and the pro forma as adjusted net tangible book value would have been $2.49 per share, representing dilution in our pro forma adjusted net tangible book value per share to new investors of $0.04.

In addition, we may choose to raise additional capital due to market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital by issuing equity securities or convertible debt, your ownership will be further diluted.

Effective upon the closing of this offering, an aggregate of 1,145,051 shares of our common stock will be reserved for future issuance under our equity benefit plans, and the number of reserved shares will also be subject to automatic annual increases in accordance with the terms of the plans. New options that we may grant under our equity benefit plans will further dilute investors purchasing common stock in this offering.

If the underwriters exercise their over-allotment option in full, the following will occur:

- the percentage of shares of our common stock held by existing stockholders will decrease to approximately 49% of the total number of shares of our common stock outstanding after this offering; and

- the number of shares of our common stock held by new investors will increase to approximately 51% of the total number of shares of our common stock outstanding after this offering.

SELECTED FINANCIAL DATA

The following tables set forth our summary financial data for the periods indicated. The following summary financial data as of and for the years ended December 31, 2013 and 2014 are derived from our audited financial statements appearing elsewhere in this prospectus. The following summary financial data for the six-month periods ended June 30, 2014 and 2015, and the selected balance sheet data as of June 30, 2015, are derived from our unaudited financial statements appearing elsewhere in this prospectus.

This summary financial data should be read together with the historical financial statements and related notes to those statements, as well as "Management's Discussion and Analysis of Financial Condition and Results of Operations," which are included elsewhere in this prospectus. See note 3 to our audited financial statements appearing elsewhere in this prospectus for information regarding computation of basic and diluted net loss per share of common stock, unaudited pro forma basic and diluted net loss per share of common stock and the unaudited pro forma weighted average basic and diluted common shares outstanding used in computing pro forma basic and diluted net loss per common share.

	Years Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
Operating expenses:				
Research and development	$ 8,914,084	$ 12,240,535	$ 5,610,764	$ 3,598,606
General and administrative	4,020,364	4,875,030	1,673,573	1,776,817
Total operating expenses	12,934,448	17,115,565	7,284,337	5,375,423
Loss from operations	(12,934,448)	(17,115,565)	(7,284,337)	(5,375,423)
Other income (expense):				
Change in fair value of warrant liabilities and investor rights obligation	(121,115)	2,266,161	385,990	(337,739)
Interest income (expense), net	10,555	(1,206,187)	(794,038)	(437,302)
Total other income (expense):	(110,560)	1,059,974	(408,048)	(775,041)
Net loss	$ (13,045,008)	$ (16,055,591)	$ (7,692,385)	$ (6,150,464)
Net loss attributable to common stockholders	$ (13,126,972)	$ (3,521,153)	$ (7,692,385)	$ (6,150,464)
Net loss per share of common stock, basic and diluted	$ (20.72)	$ (5.48)	$ (12.10)	$ (9.47)
Weighted-average shares of common stock outstanding, basic and diluted	633,669	642,052	635,714	649,721
Pro forma net loss per share of common stock—basic and diluted (unaudited)		$ (1.01)		$ (1.33)
Pro forma weighted-average shares of common stock outstanding, basic and diluted (unaudited)		3,501,768		4,630,143

	As of December 31,		As of June 30,
	2013	2014	2015
Balance Sheet Data:			
Cash and cash equivalents	$ 3,421,480	$ 11,742,349	$ 6,142,864
Total assets	5,075,600	12,316,894	7,582,120
Long term debt, net of current portion and discount	—	5,308,211	4,009,435
Total liabilities	3,065,642	10,302,027	11,425,504
Convertible preferred stock	19,856,633	28,345,531	28,345,531
Total stockholders' deficit	(17,846,675)	(26,330,664)	(32,188,915)

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

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and related notes appearing at the end of this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward looking statements that involve risks, uncertainties and assumptions. As a result of many factors, including those factors set forth in the "Risk Factors" section of this prospectus, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in this prospectus.

Overview

We are a clinical stage biopharmaceutical company with the goal of becoming a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders. We have a portfolio of clinical and preclinical compounds that we believe are best in class and where human proof of concept has been established for the compound or the target. We are currently pursuing regulatory approval of three product candidates: CERC-301, CERC-501 and CERC-406.

CERC-301 is currently in Phase 2 development as an oral, adjunctive treatment of patients with major depressive disorder, or MDD, who are failing to achieve an adequate response to their current antidepressant treatment and are severely depressed. We received fast track designation by the United States Food and Drug Administration, or FDA, in November 2013 for CERC-301 for the treatment of MDD. CERC-301 belongs to a class of compounds known as antagonists, or inhibitors, of the N-methyl-D-aspartate, or NMDA, receptor, a receptor subtype of the glutamate neurotransmitter system that is responsible for controlling neurological adaptation. We believe CERC-301 will be a first-in-class medication that will cause a significant reduction in depression symptoms in a matter of days, as compared to weeks or months with conventional therapies, because it selectively blocks the NMDA receptor subunit 2B, or NR2B, which we believe provides rapid and significant antidepressant activity without the adverse side effect profile of non selective NMDA receptor antagonists. We are also currently developing CERC-501, which is in Phase 2 development. We intend to first develop CERC-501 for treatment of substance use disorders (e.g. nicotine, alcohol, and/or cocaine) and adjunctive treatment of MDD. If we receive approval for CERC-501 for treatment of substance use disorders and for adjunctive treatment of MDD, we plan to further develop CERC-501 for the concurrent treatment of MDD and substance use disorders, or co-occurring disorders. CERC-501 was acquired in February 2015, and is a potent and selective kappa opioid receptor, or KOR, antagonist. KORs are believed to play key roles in modulating stress, mood and addictive behaviors, which form the basis of co-occurring disorders. We are preparing to initiate a clinical study to evaluate the effect of CERC-501 on aspects of tobacco withdrawal and reinstatement in the first half of 2016. In addition we are considering conducting a Phase 2 clinical study in inadequately treated subjects with major depressive disorder currently on antidepressants, with an initiation date in the second half of 2016, with the intent of thereafter pursuing additional studies focused on the treatment of major depressive disorder, substance use disorders, and, depending on market approval, the treatment of co-occurring disorders. CERC-406 is our preclinical lead candidate from our proprietary platform of compounds that inhibit catechol-O-methyltransferase, or COMT, within the brain, which we refer to as our COMTi platform. We anticipate developing CERC-406 for the treatment of residual cognitive impairment symptoms in patients with MDD.

We incorporated in January 2011 and commenced operations in the second quarter of 2011. Since inception, our operations have included organizing and staffing our company, business planning, raising capital and developing our product candidates, CERC-301, CERC-501 and FP01, which we have

discontinued developing, and the COMTi platform, including our initial product candidate CERC-406. We have no products approved for commercial sale and have not generated any revenue from product sales to date, and we continue to incur significant research, development and other expenses related to our ongoing operations. We have incurred losses in each period since our inception. We have financed our operations primarily through private placements of our common and convertible preferred stock and convertible debt. As of June 30, 2015, we had an accumulated deficit of $49.2 million. Our net loss was $13.0 and $16.1 million for the year ended December 31, 2013 and 2014, respectively, and $6.2 million for the six months ended June 30, 2015. Our ability to become and remain profitable depends on our ability to generate revenue. We do not expect to generate any product revenue unless, and until, we obtain marketing approval for, and commercialize, any of our product candidates.

We have received aggregate net proceeds of $51.1 million through June 30, 2015 from the sale of our common and convertible preferred stock and convertible debt. In addition, we received $292,000 pursuant to a grant agreement with the National Heart, Lung, and Blood Institute of the National Institute of Health, or NIH. From inception through June 30, 2015, we had incurred approximately $36.0 million of total research and development expenses and approximately $13.6 million of total general and administrative expenses.

We expect to incur significant expenses and operating losses for the foreseeable future as we continue the development and clinical trials of, and seek marketing approval for, our product candidates. If we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, distribution and outsourced manufacturing, unless we offset our commercialization expenses by entering into a favorable partnering arrangement with a third party. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company, including significant legal, accounting, investor relations and other expenses that we did not incur as a private company. Our ability to achieve profitability is dependent on our ability, alone or with others, to (i) complete the development of our product candidates successfully, (ii) obtain required marketing approvals, (iii) manufacture and market our potential products successfully or have such products manufactured and marketed by others, and (iv) gain market acceptance for such products. There can be no assurance as to whether or when we will achieve profitability.

We will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts. We will seek to fund our operations through the sale of equity, debt financings or other sources, including potential collaborations. However, we may be unable to raise additional funds or enter into such other agreements when needed on favorable terms, or at all. If we fail to raise capital or enter into such other arrangements as, and when, needed, we may have to significantly delay, scale back or discontinue the development and/or commercialization of one or more of our product candidates.

Our recurring losses and negative cash flows from operations raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph regarding this uncertainty in its report on our financial statements as of and for the year ended December 31, 2014. We have no current source of revenues to sustain our present activities, and we do not expect to generate revenues until, and unless, the FDA or other regulatory agencies approve our product candidates and we successfully commercialize any such product candidates. Accordingly, our ability to continue as a going concern will require us to obtain additional financing to fund our operations.

Components of Operating Results

Revenue

To date, we have derived all of our revenue from a research grant from NIH, which we received in 2011. We do not expect any grant revenue during 2015 and, although we plan to submit grant applications from time to time, no assurances can be made that the grant will be awarded.

We have not generated any revenue from commercial product sales. In the future, if any of our product candidates currently under development are approved for commercial sale, we may generate revenue from product sales, or alternatively, we may choose to select a collaborator to commercialize our product candidates in all or selected markets, thereby reducing revenue from product sales or increasing fees paid to collaborators. We will not generate any commercial revenue, if ever, until one of our product candidates receives marketing approval and we successfully commercialize such product candidates.

Research and Development Expenses

Our research and development expenses consist primarily of costs incurred developing, testing and seeking marketing approval for our product candidates. These costs include both external costs, which are study-specific costs, and internal research and development costs, which are not directly allocated to our product candidates.

External costs include:

- expenses incurred under agreements with third-party contract research organizations, or CROs, and investigative sites that conduct our clinical trials, preclinical studies and regulatory activities;
- payments made to contract manufacturers for drug substance and acquiring, developing and manufacturing clinical trial materials; and
- payments related to acquisitions of our product candidates and preclinical platform and milestone payments.

Internal costs include:

- personnel-related expenses, including salaries, benefits and stock-based compensation expense;
- consulting costs related to our internal research and development programs;
- allocated facilities, depreciation and other expenses, which include rent and utilities, as well as other supplies; and
- product liability insurance.

Research and development costs are expensed as incurred. We record costs for some development activities, such as clinical trials, based on an evaluation of the progress to completion of specific tasks using data such as subject enrollment, clinical site activations or information provided to us by our vendors.

We track external costs by discovery program and subsequently by product candidate once a product candidate has been selected for development. We have incurred a total of $36.0 million in research and development expenses from inception through June 30, 2015, with $13.0 million being spent on external costs primarily for CERC-301, $1.1 million spent on CERC-501, $11.2 million for our discontinued product candidate FP01, and $1.3 million spent on our COMTi platform and other preclinical programs; the remaining $9.5 million was spent primarily on internal costs, which are predominantly personnel-related costs, including stock-based compensation, and consulting and other costs. Product candidates in later stage clinical development generally have higher research and

development expenses than those in earlier stages of development, primarily due to the increased size and duration of the clinical trials. As we advance our product candidates through clinical development, we expect that the amount of our research and development spending allocated to external spending relative to internal spending will continue to grow for the foreseeable future, while our internal research and development spending should grow at a slower and more controlled pace.

During December 2014 and the first quarter of 2015, our research and development headcount was reduced by seven employees due to voluntary terminations. We expect to hire and to use consultants on an as needed basis to perform the work needed as we commence additional trials for CERC-301 and our first trial for CERC-501 during the second and third quarters of 2015. However, we anticipate that our research and development expenses for 2015 will be less than 2014. We anticipate that our research and development costs will increase in 2016 and beyond, with continued research, development and potential commercialization of our product candidates.

It is difficult to determine with certainty the duration and completion costs of our current or future preclinical programs and clinical trials of our product candidates, whether the trial results will be positive, or if, when and to what extent we will generate revenue from the commercialization and sale of any of our product candidates that obtain marketing approval. We may never succeed in achieving marketing approval for any of our product candidates. The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors, including the uncertainties of future clinical and preclinical studies, uncertainties in clinical trial enrollment rate, the number of clinical sites included in trials, and the need to add more sites, and significant and changing government regulation. In addition, the probability of success for each product candidate will depend on numerous factors, including competition, manufacturing capability, market acceptance and commercial viability. We will determine which programs to pursue and how much to fund each program in response to the scientific and clinical success of each product candidate, as well as an assessment of each product candidate's commercial potential. A change in the outcome of any of the variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, based on the results of our Phase 2 clinical trials of FP01, expected future development expenses and the addressable market, we have decided to discontinue the development and commercialization of FP01. Additionally, if the FDA or other regulatory authorities were to require us to conduct clinical trials beyond those which we anticipate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development.

General and Administrative Expenses

General and administrative expenses consist principally of professional fees, patent costs and salaries, benefits and related costs for executive and other personnel, including stock-based compensation and travel expenses. Other general and administrative expenses include facility-related costs, communication expenses and professional fees for legal, including patent-related expenses, consulting, tax and accounting services, insurance, depreciation and general corporate expenses.

We anticipate that our general and administrative expenses will increase in the future with continued research, development and potential commercialization of our existing and future product candidates and expanded compliance obligations of operating as a public company. These increases will likely include greater costs for insurance, costs related to the hiring of additional personnel, payments to outside consultants and investor relations providers, and costs for legal and accounting professionals, among other expenses. Additionally, if and when we believe a marketing approval of a product candidate appears likely, we anticipate an increase in payroll and expense as a result of our preparation for commercial operations, especially as it relates to the sales and marketing of our product candidates.

Change in Fair Value of Warrant Liabilities and Investor Rights Obligation

We have issued warrants for the purchase of our Series B preferred stock and accounted for the obligation to issue additional shares of our Series B preferred as a freestanding financial instrument, which we refer to as the Investor Rights Obligation. The warrants and Investor Rights Obligation are classified as liabilities at their respective fair values. These liabilities are remeasured at each balance sheet date and changes in fair value are recorded within our statement of operations. We will remeasure the warrant liability immediately prior to the closing of this offering and, upon the conversion of such warrant into a warrant to purchase shares of our common stock upon the completion of this offering, we will reclassify these liabilities to permanent equity. The Investor Rights Obligation will expire upon the closing of this offering in accordance with its terms, unless exercised prior thereto.

Interest Income (Expense), net

Interest income (expense), is primarily related to the amortization of the debt discounts and premiums and deferred financing fees in connection with the entry into our term debt facility in August 2014. We also made interest payments pursuant to the terms of such term debt facility.

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

Critical Accounting Policies and Significant Judgments and Estimates

This discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States of America, or GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reported period. In accordance with GAAP, we base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances. On an ongoing basis, we evaluate our estimates and assumptions, including those related to clinical and preclinical trial expenses and stock-based compensation. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in Note 2 to our audited financial statements appearing at the end of this prospectus, we believe the following accounting policies are critical to the portrayal of our financial condition and results. We have reviewed these critical accounting policies and estimates with the audit committee of our board of directors.

Research and Development Expenses

Research and development costs are expensed as incurred. We rely heavily on third parties to conduct preclinical and clinical trials, as well as for the manufacture of our clinical trial supplies. Costs for certain development activities, such as clinical trials, are recognized based on an evaluation of the progress to completion of specific tasks using data such as subject enrollment, clinical site activations or information provided to us by our vendors with respect to their actual costs incurred. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected in the financial statements as prepaid or accrued research and development expense, as the case may be.

Income Taxes

As of December 31, 2014, we had $40.9 million of Federal and Maryland net operating loss, or NOL, carryforwards that will begin to expire in 2031. As of December 31, 2014, we had $1.1 million

and $0.5 million of Maryland and federal research and development credits, respectively, that will begin to expire in 2018. The NOL and research and development credit carryforwards are subject to review and possible adjustment by the Internal Revenue Service and state tax authorities. NOL and tax credit carryforwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant shareholders over a three- year period in excess of 50%, as defined under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, as well as similar state tax provisions. This could limit the amount of NOLs that we can utilize annually to offset future taxable income or tax liabilities. The amount of the annual limitation, if any, will be determined based on the value of the company immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years. All of our tax years are currently open to examination by each tax jurisdiction in which we are subject to taxation.

Convertible Preferred Stock

We account for conversion options embedded in our convertible preferred stock in accordance with ASC 480, "*Distinguishing Liabilities from Equity*", ASC 815, "*Derivatives and Hedging*", and ASU 2014-16, an update to ASC 815. GAAP potentially requires companies to bifurcate conversion options from their host instruments and account for them as freestanding derivative financial instruments at their fair value according to certain criteria. The criteria includes circumstances in which (a) the economic characteristics and risks of the embedded derivative instrument are not clearly and closely related to the economic characteristics and risks of the host contract, (b) the hybrid instrument that embodies both the embedded derivative instrument and the host contract is not re-measured at fair value under otherwise applicable GAAP with changes in fair value reported in earnings as they occur, and (c) a separate instrument with the same terms as the embedded derivative instrument would be considered a derivative instrument. We evaluated the Series A, A-1 and B convertible preferred stock and their embedded conversion features on the date of issuance and determined the host instruments and the embedded conversion features are more akin to equity and are therefore clearly and closely related as defined by ASC 815. As such, bifurcation of the embedded conversion feature was not required.

Estimated Fair Value of Investor Rights Obligation

On July 11, 2014 and August 19, 2014, we issued Series B convertible preferred stock for aggregate proceeds of $15 million. In addition, we issued Series B convertible preferred stock upon conversion of our demand notes that had a an aggregate principal balance of $1 million at the time of conversion, as well as the conversion of our convertible promissory notes that had an aggregate principal balance of $1,250,000 and accrued interest of $9,016. At any time after the initial offering and prior to the earlier of (i) an initial public offering, or IPO, (ii) a deemed liquidation event, or (iii) June 30, 2017, the majority holders of the Series B convertible preferred stock issued may purchase up to an additional 53,351,117 shares of Series B convertible preferred stock under the same terms and conditions of the initial offering.

We have determined that our obligation to issue, and our investor's obligation to purchase, additional shares of convertible preferred stock represented a freestanding financial instrument, which we accounted for as a liability. The freestanding financial instrument liability was initially recorded at fair value, with fair value changes recognized at each balance sheet date as increases or decreases to other income (expense), net in the statement of operations. At the time of the exercise of the option which, pursuant to its terms, must occur prior to an IPO, we will remeasure the obligation to fair value with the change recognized in other income (expense), net, in the statements of operations and immediately reclassify the liability to temporary equity.

Estimated Fair Value of Convertible Preferred Stock Warrants

Warrants for shares that are contingently redeemable, such as our Series B convertible preferred stock, are accounted for as freestanding financial instruments. These warrants are classified as liabilities on our consolidated balance sheets and are recorded at their estimated fair value. At the end of each reporting period, changes in the estimated fair value during the period are recorded as a component of other income (expense), net. We will continue to adjust these liabilities for changes in fair value until the earlier of the expiration or the exercise of the warrants.

Stock-Based Compensation

We measure stock-based awards granted to our employees and nonemployee directors at fair value on the date of grant and recognize the corresponding compensation expense of those awards, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award. Generally, we issue stock options and restricted stock with only service-based vesting conditions and record the expense for these awards using the straight-line method. We have historically granted stock options with exercise prices no less than the fair market value of our common stock as of the date of grant.

We measure stock-based awards granted to nonemployee consultants at the fair value of the award on the date at which the related service is complete. Compensation expense is recognized over the period during which services are rendered by such nonemployee consultants until completed. At the end of each financial reporting period prior to the completion of the service, the fair value of these awards is re-measured using, for options, the then-current fair market value of our common stock and updated assumptions in the Black-Scholes option-pricing model and using, for restricted stock, the then-current fair market value of our common stock.

The fair value of each stock option grant is estimated using the Black-Scholes option-pricing model. We are a private company and lack company-specific historical and implied volatility information. Therefore, we estimate our expected volatility based on the historical volatility of our publicly traded peer companies and expect to continue to do so until such time as we have adequate historical data regarding the volatility of our traded stock price. The expected term of our options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options, while the expected term of our options granted to consultants and nonemployees has been determined based on the contractual term of the options. The risk-free interest rate is determined by reference to the United States Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that we have never paid cash dividends and do not expect to pay any cash dividends in the foreseeable future.

The assumptions we used to determine the fair value of stock options granted to employees and directors are as follows, presented on a weighted average basis:

	Year Ended December 31,	
	2013	2014
Risk-free interest rate	0.85 - 1.90%	0.85 - 1.97%
Expected term of options (in years)	6.0	5.0 - 6.25
Expected volatility	70.0%	70.0%
Dividend yield	0.0%	0.0%

These assumptions represented our best estimates, but the estimates involve inherent uncertainties and the application of our judgment. As a result, if factors change and we use significantly different assumptions or estimates when valuing our stock options, our stock-based compensation expense could be materially different. We recognize compensation expense for only the portion of awards that are

expected to vest. In developing a forfeiture rate estimate for pre-vesting forfeitures, we have considered our historical experience of actual forfeitures. If our future actual forfeiture rate is materially different from our estimate, our stock-based compensation expense could be significantly different from what we have recorded in the current period.

Stock-based compensation expense totaled $749,000 and $1.1 million for the years ended December 31, 2013 and 2014, respectively, and $481,000 and $292,000 for the six months ended June 30, 2014 and 2015, respectively. We record stock-based compensation expense as a component of research and development expenses or general and administrative expenses, depending on the function performed by the grantee. For the years ended December 31, 2013 and 2014, and the six months ended June 30, 2014 and 2015, we allocated stock-based compensation as follows:

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
	(in thousands)		(unaudited)	
Research and development	$ 166	$ 202	$ 78	$ 43
General and administrative	583	885	403	249
Total	$ 749	$ 1,087	$ 481	$ 292

As of June 30, 2015, we had $208,000 of total unrecognized stock-based compensation expense, which we expect to recognize over a weighted-average remaining vesting period of approximately 1.29 years. In future periods, our stock-based compensation expense is expected to increase as a result of recognizing our existing unrecognized stock-based compensation for awards that will vest and as we issue additional stock-based awards to attract and retain our employees.

Determination of the Fair Market Value of Common Stock

We are a privately held company with no active public market for our common stock. Therefore, in the absence of a public trading market for our common stock, our board of directors has determined the fair market value of our common stock at various dates, with input from management, considering our most recently available third-party valuations of common stock and its assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant. Once a public trading market for our common stock has been established in connection with the completion of this offering, it will no longer be necessary for our board of directors to determine the fair market value of our common stock in connection with our accounting for granted stock options and shares of restricted stock, as the fair market value of our common stock will be its trading price on The NASDAQ Capital Market.

We have periodically determined the fair market value of our common stock at various dates using contemporaneous valuations performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. Our common stock valuations were performed using a hybrid method, which used market approaches to determine our enterprise value. The hybrid method is a probability-weighted expected return method where the equity value in one or more of the scenarios is calculated using an option-pricing method. We selected the method based on availability and the quality of information to develop the assumptions for the methodology. We performed these contemporaneous valuations, with the assistance of a third-party valuation specialist, as of July 11, 2014 and December 31, 2014. In addition, our board of directors considered various

objective and subjective factors, along with input from management, to determine the fair market value of our common stock as of each grant date, including the following:

- prices at which we sold shares of our preferred stock and the superior rights and preferences of our preferred stock relative to our common stock;
- the progress of our research and development programs, including the status of non-clinical studies and clinical trials for our product candidates;
- our stage of development and commercialization and our business strategy;
- our financial condition, including cash on hand;
- our historical and forecasted performance and operating results;
- the composition of, and changes to, our management team and board of directors;
- the lack of an active public market for our common stock and our preferred stock;
- the likelihood of achieving a liquidity event, such as a sale of our company or an initial public offering, or IPO, given prevailing market conditions;
- the analysis of IPOs and the market performance of similar companies in the biopharmaceutical industry;
- external market conditions affecting the biopharmaceutical industry; and
- trends within the biopharmaceutical industry.

The assumptions underlying these valuations represent management's determinations, which involve inherent uncertainties and the application of management judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our equity-based compensation could be materially different.

Following the closing of this offering, the fair market value of our common stock will be determined based on the quoted market price of our common stock.

The following table summarizes by grant date the number of shares subject to options granted since January 1, 2014, the per share exercise price of the options, the fair market value of common stock underlying the options on date of grant and the per share fair value of the options:

Date of Issuance	Number of Shares Underlying Options Granted	Exercise Price per Share	Fair Market Value per Common Share	Fair Value of Options per Share
5/13/2014	44,640	$ 10.08	$ 5.32	$ 2.52
7/10/2014	78,491	$ 10.08	$ 5.32	$ 2.52 - 2.80
7/10/2014	54,353	$ 16.80	$ 5.32	$ 1.68
4/30/2015	3,571	$ 6.44	$ 5.04	$ 2.80
6/2/2015	69,285	$ 6.16	$ 5.04	$ 2.52 - 2.80

In valuing our common stock, the board of directors determined the equity value of our business by considering a number of valuation approaches and allocation methodologies. Valuation techniques considered included the Current Value Method, the Probability-Weighted Expected Return Method, or PWERM, the Option Pricing Method, or OPM, and the Hybrid Method. Given the range of possible financing and exit events that existed at the time we completed our valuations, we concluded the PWERM to be the most appropriate for purposes of valuing our common stock given our expected time to a liquidity event, subjectivity with regards to estimating possible proceeds from a future liquidation event and subjectivity with regards to the ability to estimate the probability of an IPO, sale or other financing events. The PWERM explicitly considers the various terms of our investor related

documents, including various rights of each class of our stock, at the date of the liquidity event when those rights will either be executed or abandoned. Under the PWERM, the value of each class of our stock is estimated using a probability-weighted analysis of the present value of the returns afforded to our stockholders under each of our possible future exit scenarios. The scenarios included within the PWERM analysis included IPOs, a sale transaction, remaining private and dissolution.

Discrete future outcomes considered under the PWERM included non-IPO market based outcomes as well as IPO scenarios. In the non-IPO scenarios, a large portion of the equity value is allocated to the preferred stock to incorporate higher aggregate liquidation preferences. In the IPO scenarios, the equity value is allocated pro rata among the shares of common stock and each series of preferred stock, which causes the common stock to have a higher relative value per share than under the non-IPO scenario. The fair value of the enterprise determined using the IPO and non-IPO scenarios will be weighted according to the board of directors' estimate of the probability of each scenario.

Once our common stock commences trading it will not be necessary to determine the fair value of new stock-based awards pursuant to the methodology described above.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update No. 2014-09, *Revenue From Contracts With Customers*, or ASU 2014-09. Pursuant to this update, an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The amendments in this update are currently effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period, and are to be applied retrospectively, or on a modified retrospective basis. Early application is not permitted. In July 2015, the FASB approved a one year deferral of the effective date for annual reporting periods beginning after December 15, 2017 with early adoption permitted for annual periods beginning after December 15, 2016. We are currently evaluating the impact of adopting ASU 2014-09 on our financial statements.

In June 2014, the FASB issued ASU No. 2014-10, *Development Stage Entities (Topic 915): Elimination of Certain Financial Reporting Requirements, Including an Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation*, or Topic 915. The guidance set forth in Topic 915 is intended to reduce the overall cost and complexity associated with financial reporting for development stage entities without reducing the availability of relevant information. The FASB also believes the changes will simplify the consolidation accounting guidance by removing the differential accounting requirements for development stage entities. As a result of these changes, there no longer will be any accounting or reporting differences in generally accepted accounting principles, or GAAP, between development stage entities and other operating entities. For organizations defined as public business entities, the presentation and disclosure requirements in Topic 915 will no longer be required starting with the first annual period beginning after December 15, 2014, including interim periods therein. Early application is permitted for any annual reporting period or interim period for which the entity's financial statements have not yet been issued (public business entities) or made available for issuance (other entities). We early adopted this guidance during the year ended December 31, 2014 and, as a result, we no longer present inception-to-date information about the statements of operations, cash flows, and stockholders' deficit.

In August 2014, FASB issued ASU 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, or ASU 2014-15. ASU 2014-15 explicitly requires a company's management to assess an entity's ability to continue as a going concern, and to provide related footnote disclosures in certain circumstances. The new standard will be effective in the first annual period ending after December 15, 2016, although early application is permitted. We are currently evaluating the potential impact of the adoption of this standard, but believe its adoption will have no impact on our financial position, results of operations or cash flows.

In November 2014, the FASB issued ASU No. 2014-16, *Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share is more akin to Debt or to Equity*, or ASU 2014-16. ASU 2014-16 clarifies how current GAAP should be interpreted in evaluating the economic characteristics and risks of a host contract in a hybrid financial instrument that is issued in the form of a share. Specifically, ASU 2014-16 provides that an entity should consider all relevant terms and features, including the embedded derivative feature being evaluated for bifurcation, in evaluating the nature of the host contract. ASU 2014-16 is effective for public companies for fiscal years and interim periods within those fiscal years beginning after December 15, 2015 with early adoption permitted. We adopted this guidance for the year ended December 31, 2014 and have properly applied it to hybrid financial instruments.

In April 2015, the FASB issued ASU No. 2015-03, *Simplifying the Presentation of Debt Issuance Costs*, or ASU 2015-03. ASU 2015-03 requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount. The standard also aligns the GAAP presentation with International Financial Reporting Standards and will remedy the long-standing conflict with the guidance in FASB Concepts Statement No. 6, *Elements of Financial Statements*, which indicates that debt issuance costs do not meet the definition of an asset, because they provide no future economic benefit. ASU No. 2015-03 is effective for financial statements issued for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. Early adoption is permitted for financial statements that have not been previously issued. The new guidance will be applied on a retrospective basis. The adoption of this guidance during the six months ended June 30, 2015 did not have a material impact on our balance sheets.

JOBS Act

The JOBS Act contains provisions that, among other things, reduce reporting requirements for an "emerging growth company." As an emerging growth company, we have elected to not take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards and, as a result, will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies.

Internal Control Over Financial Reporting

Assessing our staffing and training procedures to improve our internal control over financial reporting is an ongoing process. We are not currently required to comply with Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and are therefore not required to make an assessment of the effectiveness of our internal control over financial reporting. As a result, our management did not perform an evaluation of our internal control over financial reporting as of December 31, 2014. Further, our independent registered public accounting firm has not been engaged to express, nor have they expressed, an opinion on the effectiveness of our internal control over financial reporting.

Results of Operations

Comparison of Six Months Ended June 30, 2015 and 2014

Research and development

Research and development expenses decreased by $2.0 million, from $5.6 million for the six months ended June 30, 2014 to $3.6 million for the six months ended June 30, 2015. This decrease resulted from a $2.5 million decrease in external research and development costs due to preparations for two clinical trials in 2014, partially offset by a $1.0 million expense during the six months ended June 30, 2015 related to the licensing of CERC-501. There was also a decrease of $420,000 in the six months ended June 30, 2015 as compared to the same period in 2014 related to personnel compensation and benefits due to a reduction in headcount. We expect future research and development expenses to increase due to the continued development of CERC-301 and our COMTi platform, including CERC-406, as well as the commencement of the development of CERC-501.

The following table summarizes our research and development expenses for the six months ended June 30, 2014 and 2015:

	Six Months Ended June 30,	
	2014	2015
	(in thousands)	
CERC-301	$ 4,093	$ 1,552
COMTi	314	158
CERC-501	—	1,103
Personnel-related costs	1,091	671
Other research and development	113	115
	$ 5,611	$ 3,599

General and Administrative

General and administrative expenses increased by $0.1 million for the six months ended June 30, 2015 compared to the same period in 2014. During the six months ended June 30, 2015 our consulting and professional fees were $177,000 higher than the six months ended June 30, 2014 due to higher costs for financial consultants primarily in conjunction with our proposed initial public offering, and recruiter fees. In addition, marketing and business development expense was $71,000 higher for the six months ended June 30, 2015 as compared to the same period in 2014.

Change in Fair Value of Warrants and Investor Rights Obligation

We recognized a loss on the change in fair value of our warrants and Investor Rights Obligation of $0.3 million during the six months ended June 30, 2015 as compared to a gain of $0.4 million during the same period in 2014. The change during the six months ended June 30, 2015 in fair value of warrants and Investor Rights Obligation is primarily due to the issuance of warrants for shares of Series B convertible preferred stock and our Investor Rights Obligation during the third quarter of 2014 and their respective changes in fair value.

The change during the six months ended June 30, 2014 in fair value was due to the gain recognized from marking the warrants for shares of Series A-1 convertible preferred stock to market.

Interest Expense, Net

Interest expense decreased by $0.4 million for the six months ended June 30, 2015 compared to the same period in 2014. The decrease is primarily due to the amortization of debt discounts in

connection with our financing activities in 2014. This was offset for interest paid under our secured term loan facility that was entered into in August 2014 during the six months ended June 30, 2015.

Comparison of Years Ended December 31, 2014 and 2013

Research and development

Research and development expenses increased by $3.3 million, from $8.9 million for the year ended December 31, 2013 to $12.2 million for the year ended December 31, 2014. During 2013, we had a partial year of FP01 clinical trial costs and minimal costs in 2014 due to the completion of the FP01 clinical trials. In 2014, we continued the development of CERC-301 and our COMTi platform. In the aggregate, these external research and development costs increased by $3.4 million. There was also an increase of $456,000 related to compensation and benefits related to personnel and related costs in 2014 as compared to 2013. Other research and development costs decreased by $569,000 due primarily to the inclusion of costs in 2013 for a research project on a compound that was discontinued. We expect future research and development expenses to increase due to the continued development of CERC-301 and our COMTi platform, including CERC-406, as well as the commencement of the development of CERC-501.

The following table summarizes our research and development expenses for the years ended December 31, 2013 and 2014:

	Year Ended December 31,	
	2013	2014
	(in thousands)	
FP01	$ 2,990	$ 28
CERC-301	2,717	8,711
COMTi	353	761
Stock-based compensation	166	202
Other personnel-related costs	1,857	2,277
Other research and development	831	262
	$ 8,914	$ 12,241

General and Administrative

General and administrative expenses increased by $0.9 million for the year ended December 31, 2014 compared to the same period in 2013. Compensation and benefits expenses in 2014 were $0.6 million higher than in 2013 primarily due to option awards that were fully vested at the time of the award. We also incurred $0.6 million in additional consulting and professional fees in connection with the initial submission of our registration statement. These increases were offset by a $0.3 million reduction in marketing and business development expenses in 2014.

Change in Fair Value of Warrants and Investor Rights Obligation

We recognized a loss on the change in fair value of our warrants and Investor Rights Obligation of $0.1 million during the year ended December 31, 2013 compared to a gain of $2.3 million in 2014. The change in fair value of warrants and Investor Rights Obligation is primarily due to the issuance of warrants for shares of Series B convertible preferred stock and our Investor Rights Obligation in 2014 and their respective changes in fair value.

Interest Expense, Net

Interest expense increased by $1.2 million for the year ended December 31, 2014 compared to the same period in 2013. The increase is primarily due to the amortization of debt discounts, premiums, and deferred financing fees in connection with our financing activities in 2014 as well as the interest paid under our secured term loan facility that was entered into in August 2014.

Liquidity and Capital Resources

We have devoted most of our cash resources to research and development and general and administrative activities. Since our inception, we have incurred net losses and negative cash flows from our operations. We expect to incur significant expenses and operating losses for the foreseeable future as we continue the development and clinical trials of, and seek marketing approval for, our product candidates. We incurred net losses of $6.2 million in the six months ended June 30, 2015 and $13.0 million and $16.1 million for the years ended December 31, 2013 and 2014, respectively. At June 30, 2015, we had an accumulated deficit of $49.2 million, a working capital deficit of $1.0 million and cash and cash equivalents of $6.1 million. To date, we have not generated any revenues from the sale of products and we do not anticipate generating any revenues from the sale of our product candidates for the foreseeable future. Historically, we have financed our operations principally through private placements of common and convertible preferred stock, convertible and nonconvertible debt. Through June 30, 2015 we have received aggregate net proceeds of $51.1 million primarily from the issuance of common and convertible preferred stock and debt. We anticipate funding our operations over the next several years from further sales of debt and equity securities, including this offering.

Cash Flows

The following table summarizes our cash flows for the six months ended June 30, 2014 and 2015:

	Six Months Ended June 30,	
	2014	2015
	(in thousands)	
Net cash (used in) provided by:		
Operating activities	$ (4,451)	$ (4,800)
Investing activities	—	—
Financing activities	1,250	(799)
Net (decrease) in cash and cash equivalents	$ (3,201)	$ (5,599)

Net cash used in operating activities

Net cash used in operating activities was $4.5 million for the six months ended June 30, 2014 and consisted primarily of a net loss of $7.7 million offset by a non-cash increase of $481,000 of stock-based compensation and a $2.1 million increase in accounts payable and accrued expenses due primarily to increased clinical trial activities.

Net cash used in operating activities was $4.8 million for the six months ended June 30, 2015 and consisted primarily of a net loss of $6.2 million and an increase in our net operating assets of $0.6 million primarily due to the timing of payments related to our personnel and clinical trial activities. The loss was also offset by $0.7 million in non-cash charges that are primarily related to non-cash interest and a $0.3 million non-cash loss on the change in fair value of our warrants and Investor Rights Obligation liabilities.

Net cash provided by and (used in) financing activities

Net cash provided by and used in financing activities was $1.25 million and ($0.8) million for the six months ended June 30, 2014 and June 30, 2015, respectively, and related to proceeds from the bridge note financing in 2014 and IPO-related deferred financing costs and payments on outstanding debt obligations in 2015.

The following table summarizes our cash flows for the years ended December 31, 2013 and 2014:

	Year Ended December 31,	
	2013	2014
	(in thousands)	
Net cash (used in) provided by:		
Operating activities	$ (11,485)	$ (15,518)
Investing activities	(29)	(20)
Financing activities	5,416	23,859
Net decrease (increase) in cash and cash equivalents	$ (6,098)	$ 8,321

Net cash used in operating activities

Net cash (used in) operating activities was $11.5 million for the year ended December 31, 2013 and consisted primarily of a net loss of $13.0 million offset by a non-cash increase of $749,000 of stock-based compensation and a $1.1 million increase in accounts payable and accrued expenses due primarily to increased clinical trial activities.

Net cash used in operating activities was $15.5 million for the year ended December 31, 2014 and consisted primarily of a net loss of $16.1 million, a $2.3 million non-cash gain on the change in fair value of our warrants and Investor Rights Obligation liabilities, and a decrease in our net operating assets of $0.4 million primarily due to the timing of payments related to our personnel and clinical trial activities. These decreases were offset by $3.2 million in non-cash charges that are primarily related to stock-based compensation expense, non-cash interest, and the expensing of offering costs that were initially reflected as a financing cash outflow of $1.1 million, $1.0 million and $1.1 million, respectively.

Net cash used in investing activities

Net cash used in investing activities for the years ended December 31, 2013 and 2014 was $29,000 and $20,000, respectively. Cash used in investing activities primarily consisted of purchases of fixed assets related to purchases of furniture and computer equipment.

Net cash provided by financing activities

Net cash provided by financing activities was $5.4 million for the year ended December 31, 2013, which was primarily due to net proceeds of $6.1 million received from the sale and issuance of our Series A-1 convertible preferred stock and warrants offset by $0.7 million in payments of deferred financing fees related to our IPO efforts.

Net cash provided by financing activities was $23.9 million for the year ended December 31, 2014, which was primarily due to the proceeds received from our convertible debt, demand notes, and Series B convertible preferred stock equity issuance aggregating $17.3 million and $7.4 million from a term loan. We also paid $0.4 million in financing fees related to the equity and debt financings and $0.4 million for IPO-related deferred financing costs.

Operating and Capital Expenditure Requirements

We have not achieved profitability since our inception and we expect to continue to incur net losses for the foreseeable future. We expect our cash expenditures to increase in the near term as we fund our future development of CERC-301, CERC-501 and our COMTi platform, including preclinical development for CERC-406. Following this offering, we will be a publicly traded company and will incur significant legal, accounting and other expenses that we were not required to incur as a private company. In addition, the Sarbanes-Oxley Act, as well as rules adopted by the Securities and Exchange Commission, or SEC, and the NASDAQ Stock Market, requires public companies to implement specified corporate governance practices that are currently inapplicable to us as a private company. We expect these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. We may also acquire or in-license new product candidates.

Based on our research and development plans and our timing expectations related to the progress of our programs, we expect that the net proceeds from this offering, together with our existing cash and cash equivalents as of June 30, 2015, will enable us to fund our operating expenses and capital expenditure requirements through the end of 2016. Each of our product candidates are still in the early stages of clinical and preclinical development and the outcome of these efforts is uncertain. We cannot estimate the actual amounts necessary to successfully complete the development and commercialization of our product candidates or whether, or when, we may generate revenue. Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity or debt financings and exploring the possibility of entering into collaboration arrangements.

We will need to raise substantial additional financing in the future to fund our operations. In order to meet these additional cash requirements, we may seek to sell additional equity or convertible securities that may result in dilution to our stockholders. If we raise additional funds through the issuance of convertible securities, these securities could have rights senior to those of our common stock and could contain covenants that restrict our operations. There can be no assurance that we will be able to obtain additional equity or debt financing on terms acceptable to us, if at all. If we raise additional funds through collaboration and licensing agreements with third parties, it may be necessary to relinquish valuable rights to our product candidates, technologies or future revenue streams or to grant licenses on terms that may not be favorable to us. Our future capital requirements will depend on many forward-looking factors, including:

- the progress and results of the Phase 2 clinical program for CERC-301 and changes to our development plan with respect to CERC-301, if any;
- the progress and results of the clinical trials being conducted, or contemplated being conducted, for CERC-501 and changes to our development plan with respect to CERC-501, if any;
- our plan and ability to enter into collaborative agreements for the development and commercialization of our product candidates;
- the number and development requirements of any other product candidates that we pursue;
- the scope, progress, results and costs of researching and developing our product candidates or any future product candidates, both in the United States and in territories outside the United States;
- the costs, timing and outcome of regulatory review of our product candidates or any future product candidates, both in the United States and in territories outside the United States;

- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution for any of our product candidates for which we receive marketing approval;
- the costs and timing of any product candidate acquisition or in-licensing opportunities;
- any product liability or other lawsuits related to our products;
- the expenses needed to attract and retain skilled personnel;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs involved in preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending our intellectual property-related claims, both in the United States and in territories outside the United States; and
- the timing and success of this offering.

Please see "Risk Factors" for additional risks associated with our substantial capital requirements.

Contractual Obligations and Commitments

The following is a summary of our long-term contractual cash obligations as of December 31, 2014 (in thousands):

Contractual Obligation(1)	Total	Less than One Year	1 - 3 Years	3 - 5 Years	More than 5 Years
Long Term Debt Obligations(2)	$ 8,428	$ 2,633	$ 5,795	$ —	$ —
Operating lease obligations(3)	612	147	306	159	—
Total contractual obligations	$ 9,040	$ 2,780	$ 6,101	$ 159	$ —

(1) This table does not include any contingent milestone or royalty payments that may become payable to third parties under license agreements because the timing and likelihood of such payments are not known.

(2) Amount represents principal and interest cash payments over the life of the debt obligations, including anticipated interest payments that are not recorded on our balance sheet.

(3) Operating lease obligations reflect our obligations pursuant to the terms of a lease agreement entered into on August 8, 2013 for our office space located in Baltimore, Maryland.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, as defined by applicable SEC rules and regulations.

Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks in the ordinary course of our business. These market risks are principally limited to interest rate fluctuations. We had cash and cash equivalents of $3.4 million, $11.7 million and $6.1 million as of December 31, 2013, December 31, 2014, and June 30, 2015, respectively, consisting of cash and money market funds. We do not enter into investments for trading or speculative purposes. We do not believe an immediate 10% increase in interest rates would have a material effect on the fair market value of our cash and money market funds, and accordingly we do

not expect our operating results or cash flows to be materially affected by a sudden change in market interest rates.

We contract with CROs, clinical research organizations and contract manufacturers globally. We may be subject to fluctuations in foreign currency rates in connection with some of these agreements. To date, we have not incurred material effects from foreign currency changes on these contracts. Transactions denominated in currencies other than the United States dollar are recorded based on exchange rates at the time such transactions arise.

BUSINESS

Overview

We are a clinical-stage biopharmaceutical company with the goal of becoming a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders. We have a portfolio of clinical and preclinical compounds that we believe are best-in-class due to their unique mechanism of action and where human proof of concept has been established for the compound or the target. We are currently pursuing regulatory approval of three product candidates: CERC-301, CERC-501 and CERC-406.

CERC-301 is currently in Phase 2 development as an oral, adjunctive treatment of patients with major depressive disorder, or MDD, who are failing to achieve an adequate response to their current antidepressant treatment and are severely depressed. We received fast track designation by the Food and Drug Administration, or FDA, in November 2013 for CERC-301 for the treatment of MDD. CERC-301 belongs to a class of compounds known as antagonists, or inhibitors, of the N-methyl-D-aspartate, or NMDA, receptor, a receptor subtype of the glutamate neurotransmitter system that is responsible for controlling neurological adaptation. We believe CERC-301 will be a "first-in-class" medication that will cause a significant reduction in depression symptoms in a matter of days, as compared to weeks or months with conventional therapies, because it selectively blocks the NMDA receptor subunit 2B, or NR2B, which we believe provides rapid and significant antidepressant activity without the adverse side effect profile of non-selective NMDA receptor antagonists. We are also currently developing CERC-501, which is in Phase 2 development. We intend to first develop CERC-501 for adjunctive treatment of MDD and for substance use disorders (e.g., nicotine, alcohol, and/or cocaine). If we receive approval for CERC-501 for adjunctive treatment of MDD and for substance use disorders, we plan to further develop CERC-501 for the concurrent treatment of MDD and substance use disorders, or co-occurring disorders. CERC-501 was acquired in February 2015, and is a potent and selective kappa opioid receptor, or KOR, antagonist. KORs are believed to play key roles in modulating stress, mood and addictive behaviors, which form the basis of co-occurring disorders. We believe that proof of concept of KOR antagonism for the adjunctive treatment of MDD is supported by Alkermes plc's, or Alkermes, Phase 2 results for ALKS-5461, which is believed to be acting as a functional kappa antagonist. Alkermes has reported positive Phase 2 results for ALKS-5461 as an adjunctive antidepressant in MDD subjects and has initiated a Phase 3 development program. We are preparing to initiate a clinical study to evaluate the effect of CERC-501 on aspects of tobacco withdrawal and reinstatement by the first half of 2016. In addition we are considering conducting a Phase 2 clinical study in inadequately treated subjects with MDD currently on antidepressants, with an initiation date in the second half of 2016. Thereafter we intend to pursue additional studies focused on substance use disorders, the adjunctive treatment of MDD and, depending on marketing approval, the treatment of co-occurring disorders. CERC-406 is our preclinical lead candidate from our proprietary platform of compounds that inhibit catechol-O-methyltransferase, or COMT, within the brain, which we refer to as our COMTi platform. We anticipate developing CERC-406 for the treatment of residual cognitive impairment symptoms in patients with MDD.

Members of our management team have extensive pharmaceutical product development and commercialization experience and they have played key roles in the development or commercialization of Prozac®, Zyprexa®, Lyrica®, Cymbalta®, Neurontin® and Abilify®, each of which is a neuroscience product that has generated over $1.0 billion of annual revenues. Collectively, our officers and directors have contributed to the submission of numerous Investigational New Drug Applications, or INDs, and nine New Drug Applications, or NDAs, to the FDA. Leveraging the experience of our management team, within the last 24 months we obtained IND clearance and received fast track designation for CERC-301 from the FDA, completed two clinical trials of CERC-301, selected CERC-406 as our preclinical lead candidate from our COMTi platform and, most recently, broadened our clinical pipeline by in-licensing CERC-501.

Our Strategy

Our goal is to be a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders. We systematically identify platforms and product candidates for which human proof of concept exists in the intended indication, for either the target or the compound, and for which biomarkers are available to measure therapeutic response. We target conditions where we believe current treatments fail to address unmet medical needs, and where we can apply clinical strategies to increase efficacy signal detection. These strategies include using personalized therapeutic approaches and placebo mitigation techniques to facilitate regulatory approval for our product candidates.

Our strategic objectives include:

- ***Rapidly Advance the Clinical Development of CERC-301.*** We are currently developing CERC-301 as an oral, adjunctive medication for patients with MDD who are failing to achieve an adequate response to their current antidepressant treatment and are severely depressed. We have recently completed a seven day, inpatient exploratory Phase 1 study of CERC-301 in 48 healthy volunteers in order to determine maximal dose range, in addition to an outpatient Phase 2 clinical trial of an 8 mg daily dose of CERC-301 as an adjunctive therapy in 137 subjects who were severely depressed despite ongoing antidepressant treatment and, who have recently experienced active suicidal ideation. In the third quarter of 2015, we initiated a Phase 2 efficacy study for CERC-301 in order to evaluate doses greater than 8 mg and a revised dosage regimen. If we demonstrate safety and efficacy in these and subsequent Phase 2 and 3 studies, we will consider also initiating separate development programs in other indications, such as active suicidal ideation, bipolar depression and other neuropsychiatric conditions.

- ***Rapidly Advance the Clinical Development of CERC-501.*** We plan to initiate a proof of concept clinical trial in nicotine dependence by first half of 2016, which will provide us with the opportunity to evaluate the effect of CERC-501 on tobacco reinstatement behavior and assess subjects' craving, mood and anxiety during abstinence periods. We also expect to receive data from three additional studies concerning CERC-501, in cocaine addiction, treatment resistant depression, or TRD, and the inability to experience pleasure, or anhedonia, two of which are being conducted under the auspices of the National Institute of Mental Health, or NIMH. Thereafter we are considering conducting a Phase 2 clinical study in inadequately treated subjects with major depressive disorder currently on antidepressants, with an initiation date in the second half of 2016. If these studies are successful, we plan to develop CERC-501 as a treatment of substance use disorders, a once-a-day, oral adjunctive treatment of MDD, and, depending on marketing approval, the treatment of co-occurring disorders.

- ***Advance CERC-406 into IND-enabling Studies.*** We anticipate developing CERC-406 as a "first-in-class," oral, adjunctive treatment for patients with residual cognitive impairment symptoms suffering from MDD. We expect to complete IND-enabling studies and submit an IND for CERC-406 by the first half of 2017.

- ***Use our COMTi Platform to Build a Pipeline of Product Candidates for Conditions Where Impaired Executive Function is a Core Symptom.*** By targeting COMT inhibition, for which human proof of concept in multiple conditions exists for the COMT inhibition class of drugs, we believe we have the ability to address the impairment of executive function in a highly specific manner, guided by biomarkers and pharmacogenomics. Our COMTi platform, which we licensed from Merck & Co., Inc. and its affiliates, or Merck, provides exclusive access to a library of approximately 1,800 compounds that we believe may penetrate the nervous system and preferentially inhibit COMT in the brain. In 2015 and 2016, in addition to progressing the development of CERC-406, we intend to establish the data set necessary to select additional lead candidates from the library for treatment of various conditions where impaired executive

function is a core symptom. In addition to compounds that we may develop on our own, we are exploring early development collaborations with third parties on an indication-specific basis in order to maximize the value of our COMTi platform.

- ***Establish Specialty Segment Commercialization and Marketing Capabilities in the United States.*** We intend to selectively retain commercialization rights for certain of our product candidates and to build specialty commercialization capabilities in the United States, which we may complement with co-promotion agreements with partners. We may also seek to commercialize any of our approved products outside of the United States, although we plan to do so with one or more collaborators.

- ***Establish Collaborations to Maximize Value.*** Collaborations, through licenses or strategic partnerships, may provide access to the considerable scientific, development, regulatory and commercial capabilities of biopharmaceutical corporations, potentially providing us with additional infrastructure to more efficiently develop and commercialize assets in our product candidate portfolio. Our selection criteria for potential partners include market presence in complementary areas and geographies, in addition to a demonstrated ability to contribute to the creation of the highest quality data sets and registration materials for submission to regulatory authorities when we seek marketing approval for our product candidates.

- ***Expand our Product Candidate Portfolio Through In-Licensing and Strategic Acquisitions.*** In migrating away from the centralized research and development model of the past, many major pharmaceutical companies have deemphasized their neuroscience discovery and development programs in recent years. Given our focus and expertise, these programs may represent compelling acquisition opportunities. We believe we have the ability to identify, evaluate and procure valuable product programs that are consistent with our goal of becoming a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders. We plan to continue to leverage these opportunities to expand our product candidate portfolio in a fashion that fits within our core strategy and enhances our overall value.

Product Pipeline

The following table summarizes key information about our three product candidates and further detail regarding each product candidate follows:

Product Candidate / Platform	Potential Indication(s)	Stage of Development	Anticipated Milestones
CERC-301	Adjunctive treatment of MDD with rapid onset	Phase 2	Data in the second half of 2016
CERC-501	Substance use disorders Adjunctive treatment of MDD Co-occurring disorders	Phase 2	Data in the second half of 2016
CERC-406	Residual cognitive impairment symptoms in MDD	Preclinical	IND submission anticipated in the first half of 2017

CERC-301

Current Depression Treatment Paradigm and Limitations

Depression is one of the most common serious medical and psychiatric disorders, with greater than 150 million adults worldwide suffering from MDD at any given time, according to a 2003 report by the World Health Organization, or WHO, titled *Investing In Mental Health*. According to the U.S. National Comorbidity Survey Replication published in 2007, or the NCS-R, more than 16 million adults in the United States, which represents approximately 6.7% of its entire adult population, will suffer from a MDD episode in a 12 month period. Furthermore, according to the NCS-R, approximately 45% of these cases can be classified as severe, and suicide is often a grave complication associated with depression. Studies have shown that approximately 50% to 70% of severely depressed patients have experienced suicidal ideation. Over time, the understanding of psychiatric and neurological disorders, as well as their biological underpinnings, has evolved based on a combination of clinical and pre-clinical research. Over the past 50 years, many depression therapies and hypotheses have primarily been based on changing the levels of monoamine neurotransmitters, such as serotonin, norepinephrine and dopamine, in the brain. Manipulating these neurotransmitters impacts mood, but monoamine antidepressants are slow in onset, requiring multiple weeks for patients to obtain a response and patients may suffer from sexual dysfunction and other side effects from such treatment.

Numerous studies have shown that many patients do not respond to their initial antidepressant therapy. For example, according to a 2006 report titled *Acute and Longer-Term Outcomes in Depressed Outpatients Requiring One or Several Treatment Steps: A STAR-D Report*, or the STAR-D Report, 51.4% of patients failed to respond, defined as achieving a 50% reduction in symptoms, and only 36.8% became symptom free, or achieved remission, after their initial 12-week treatment course with monoamine antidepressants. As such, physicians commonly will switch patients' antidepressants to manage depression, and patients may require two or three courses of treatment, before achieving satisfactory relief. The depression may persist following a course of treatment and additional medications may need to be used adjunctively. These adjunctive agents may include atypical antipsychotics, like aripiprazole and quetiapine, or other agents such as buproprion, and lithium. While certain patients experience improvement in their depressive symptoms when these additional therapies are added to their existing treatments, many do not. For example, according to a study published by Dr. Robert Berman and others in 2007, entitled *The Efficacy and Safety of Aripiprazole as Adjunctive Therapy in Major Depressive Disorder: A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study*, only 32.4% of patients with treatment resistant depression responded to six weeks of adjunct treatment of the atypical antipsychotic aripiprazole.

According to the IMS Institute for Healthcare Informatics' 2012 report titled *The Use of Medicines in the United States: Review of 2011*, over 264 million prescriptions totaling $11 billion were filled for depression in the United States in 2011. According to the STAR-D Report most marketed depression therapies are subject to significant limitations, including:

- ***Time to therapeutic response.*** Current monoamine antidepressants are slow in onset, allowing depressive symptoms to persist for multiple weeks before patients experience the onset of the drugs' therapeutic effect; full effect is frequently not seen until 12 weeks.

- ***High rates of treatment failures and low rates of remission.*** Even with the widespread availability of serotonin reuptake inhibitors, or SSRIs, or serotonin norepinephrine reuptake inhibitors, or SNRIs, MDD remains a leading cause of disability in the world. According to the STAR-D Report, which was funded by the NIMH, despite four courses of different antidepressant medications, 33% of patients did not achieve remission.

- ***Side effects.*** Common side effects seen with current depression therapies include gastrointestinal disturbance, dizziness, drowsiness, insomnia and sexual dysfunction. A common symptom of depression is a loss of libido. Compounding this issue, although most side effects associated with SSRIs and SNRIs subside within the first few weeks of treatment, sexual dysfunction often persists throughout the course of treatment. According to the STAR-D Report, many patients who experience side effects discontinue treatment. In addition, currently used adjunctive treatments include antipsychotic agents which have both efficacy and treatment-limiting side effects, including weight gain, increased risk of diabetes and cardiovascular risk.

Emergence of NMDA Receptor Antagonists as Antidepressants

Recently, a new class of antidepressant has emerged known as antagonists of the NMDA receptor, a receptor subtype of the glutamate neurotransmitter system that is responsible for controlling neurological adaptation. Research on ketamine, such as *A Randomized Trial of an N methyl D aspartate Antagonist in Treatment Resistant Major Depression* study conducted from November 2004 to September 2005 by Dr. Carlos A. Zarate, Jr. and others, has provided evidence that NMDA antagonists can provide significant antidepressant mood effects within 24 hours of administration, acting as rapid acting antidepressants, or RAADs, in MDD and bipolar depression. Moreover, research has also demonstrated that ketamine causes a rapid reduction in suicidal ideation, in contrast to conventional antidepressants that may actually worsen suicidal ideation in children, adolescents, and young adults. We believe efficacy of the class is further supported by the off-label use of ketamine throughout the United States for treatment resistant bipolar depression and MDD.

Accumulating evidence, such as that discussed in an article published in 2014 by Ronald Duman and others, titled *Neurobiology of Stress, Depression, and Rapid Acting Antidepressants: Remodeling Synaptic Connections*, suggests that the antidepressant effect of this new class of antidepressant, as demonstrated by the study of ketamine, is associated with increasing synaptic connections in the brain, which is driven by increases in the synthesis of neuronal proteins. A messenger of this synthetic activity is brain derived neurotrophic factor, or BDNF, which we believe is increasingly considered to be a biomarker of depression and anti-depressant effect. BDNF levels have been found to be low in subjects with major depression compared to normal controls, correlate negatively with the severity of depression and recover to levels associated with normal subjects after successful antidepressant treatment. However, non selective NMDA antagonists such as ketamine have significant limitations. Ketamine is an anesthetic, is not approved for use as an antidepressant, and causes increases in heart rate and blood pressure, hallucinations and other psychological manifestations. In addition, psychiatric use of ketamine may be limited by the need for intravenous administration, the unapproved nature of the use of the drug for the sub chronic treatment of MDD and, as a result, the unknown safety profile, and the need for repeated infusions to maintain a treatment response. Ketamine is scheduled by the Drug Enforcement Administration or DEA, as a Schedule III controlled substance and is prone to abuse. The classification of ketamine as a Schedule III controlled substance means that manufacturers, distributors, and health care providers that handle or prescribe ketamine must, among other things, register with the DEA, keep accurate and complete records, take special precautions to secure the drug and prevent its loss or theft, and may need to periodically file reports with the DEA. These extra regulatory requirements may increase the cost of manufacturing, distributing and prescribing the drug.

Recent research has unveiled new insights into NMDA inhibition and the neurobiology of depression, and points to new classes of antidepressant medications such as antagonists of the NR2B subunit containing NMDA receptors. We believe that NR2B inhibitors, which work on the glutamate system by blocking only NR2B containing NMDA receptors, have the potential to provide rapid and significant antidepressant activity without many of the adverse side effects of ketamine and other non selective NMDA receptor antagonists, as demonstrated in clinical trial published in 2012, titled *Investigational NMDA Receptor Modulators for Depression*, conducted by B. Szewczyk and others.

According to a 2013 Decision Resources report, Unipolar Depression, patients suffering from MDD need more effective agents with a faster onset of action, a higher remission rate, better efficacy for comorbid symptoms and a better side effect profile than that of conventional monoamine drugs—all potential qualities of this new class of antidepressants.

Our Solution

CERC-301 is a selective NR2B antagonist that we are currently developing as a "first-in-class," oral adjunctive medication for patients with MDD who are failing to achieve an adequate response to their current antidepressant treatment and are severely depressed. Furthermore, we believe CERC-301 will have a rapid onset of effect, be well tolerated and may have fewer side effects than the leading adjunctive treatments currently available, such as atypical antipsychotics, whose treatment efficacy is hindered by side effects such as weight gain and increased risk of diabetes. We expect that a drug with these attributes will lead to improved compliance and outcomes. We believe an antidepressant with rapid onset of effect can possibly provide its greatest benefit by quickly relieving suicidality, a risk factor for suicide. Studies have shown that approximately 50% to 70% of severely depressed patients have experienced suicidal ideation.

We licensed MK-0657, which is now known as CERC-301, from Merck and we believe that its selective NR2B inhibition has the potential to provide both the rapid antidepressant and suicidality reduction effects of non-selective NMDA antagonists, without many of their side effects, including increases in heart rate, blood pressure and mental status changes. Preliminary studies by Merck in healthy subjects failed to demonstrate clinically significant changes in mental status, however, modest changes in blood pressure were observed. As discussed in a 2009 article titled *Allosteric Modulators of NR2B-Containing NMDA Receptors: Molecular Mechanisms and Therapeutic Potential*, there is animal evidence that compounds selectively targeting NR2B receptor subunits, such as CERC-301, retain many of the beneficial effects while reducing many of the less desirable side effects of other NMDA antagonists.

We believe CERC-301 may have the following advantages over ketamine and other non-selective NMDA antagonists:

- minimal psychotomimetic effects, including hallucinations and intoxication;
- available in a convenient, oral dosing form suitable for daily or intermittent dosing; and
- ability to use for the prevention of a relapse of depression.

Additionally, we believe that CERC-301 may have the following advantages over conventional antidepressant therapies and currently approved adjunctive therapies:

- more rapid onset of action, including reduction in suicidality;
- higher rate of response and remission;
- reduced/absent sexual side-effect profile; and
- enhanced safety profile with respect to weight gain and increased risk of diabetes.

We received fast track designation for CERC-301 in November 2013 for the treatment of MDD. Fast track designation may help facilitate our development of CERC-301 and expedite the FDA's review of our marketing application as it may allow us to have more frequent meetings and correspondence with the FDA and the FDA may initiate review of sections of an NDA on a rolling basis before the application is complete.

Our Program

Current Development Status

In August 2012, Dr. Lobna Ibrahim and others at the NIMH reported the results of a study of CERC-301 titled *A Randomized, Placebo-Controlled, Crossover Pilot Trial of the Oral Selective NR2B Antagonist MK-0657 in Patients with Treatment-Resistant Major Depressive Disorder,* which we refer to as the 2012 NIMH Study. The study was conducted in five subjects with moderate TRD, as indicated by the subject's baseline scores on the Hamilton Depression Inventory 17 item scale, or HAMD-17. The 2012 NIMH Study demonstrated increases in plasma BDNF and a rapid onset of antidepressant effect of CERC-301 in TRD subjects without observations of significant changes in blood pressure or other side effects commonly seen with non-selective NMDA receptor antagonists. In 2014, we completed an exploratory inpatient pharmacokinetic, or PK, and pharmacodynamics, or PD, study in healthy volunteers, which we refer to as the PK/PD study, and a Phase 2 outpatient efficacy study for the adjunctive treatment of subjects with severe MDD who had recently experienced suicidal ideation. The PK/PD study provided evidence of safety and tolerability at daily doses up to 20 mg for seven days. Plasma levels of BDNF appeared to be higher in subjects receiving 16 mg and 20 mg doses of CERC-301 as compared to those subjects receiving placebo. In the Phase 2 study, CERC-301 was administered daily at a dose of 8 mg for 28 days as an adjunctive treatment to subjects' current medications. The primary endpoint was antidepressant effect at seven days as measured by the HAMD-17. The 8 mg dose was well tolerated, and there were no differences in mean blood pressure effects or heart rate between the treatment groups. However, the 8 mg dose of CERC-301 failed to achieve its primary endpoint and plasma BDNF levels did not change, which we believe suggests that drug exposure was inadequate. Given the safety and tolerability observed and the increases in BDNF seen at higher doses in the PK/PD study, we proposed to the FDA that doses higher than 8 mg can be tested in outpatient depression studies and that the potential of CERC-301 may be optimized with a higher dosing regimen. The FDA had no comments regarding the higher dosing regimen. We have recently initiated a Phase 2 study utilizing a higher dose and a revised dosing regimen, Clin301-203, with results becoming available in the second half of 2016.

Study Clin301-203: A Randomized, Double-Blind, Placebo-Controlled Study of Intermittent Doses of CERC-301 in the Treatment of Subjects with Severe Depression Despite Antidepressant Treatment

Study Overview: Clin301-203 is designed as a randomized, double blinded placebo-controlled trial in order to distinguish effects of drug treatment in an efficient and unbiased manner. We will evaluate the antidepressant effect of 12 mg and 20 mg doses of CERC-301 and enroll approximately 104 subjects with MDD who are currently experiencing a severe depressive episode despite stable ongoing treatment with either a SSRI or SNRI. This study will enable us to evaluate both the rapid onset of antidepressant effect and the duration of effect of CERC-301 over a seven and 14 day period after the last administration of the study drug.

Study Design: Clin301-203 includes two dose administrations seven days apart, followed by 14 days of observation, for a total study duration of 42 days. The primary objective of Clin301-203 is to evaluate the antidepressant effect of CERC-301, in 12 mg and 20 mg dosages, compared to placebo averaged between two and four days post-treatment with study drug, assessed by the 6-item unidimensional sub-set of the HAMD-17, or Bech-6. This approach will allow detection of acute drug effects as well as duration of drug effect. The key secondary objectives include evaluating the antidepressant effect of CERC-301 averaged between two and four days post-study drug administration, assessed by the HAMD-17 and the 7-item unidimensional subset of the HAMD-17, or the Santen-7. In addition, the antidepressant effects of CERC-301 at two, four and seven days after each dose and 14 days after last administration of study drug assessed by the Bech-6, Santen-7, HAMD-17, Clinically Useful Depression Outcome Scale-Anxiety Self Report, or CUDOS-A-SR, and Snaith-Hamilton Pleasure Scale Self Report, or SHAPS-SR will be evaluated. Antidepressant effect will also be assessed

using the Quick Inventory of Depressive Symptomatology Self Report, or QIDS-SR, Clinical Global Impression-Improvement, or CGI-I, and CGI-Severity, or CGI-S at seven days after each dose and 14 days after last administration of study drug. We will also evaluate the safety and tolerability of intermittent doses of CERC-301, and the relationship between baseline symptoms and rate/magnitude of response. Qualified site raters will administer clinician-administered scales and the subjects will administer self-reported scales. Clin301-203 will include a total of nine study visits, with four of the nine visits conducted remotely via telephone in order to mitigate the burden on the subjects.

Enrollment Strategies: The study will be performed in subjects with MDD currently experiencing a severe depressive episode despite current stable treatment with either a SSRI or SNRI. Subjects will be screened directly from psychiatric clinic referrals, from depression clinical study databases, and from advertising. Potential subjects will be screened by the study sites for all inclusion, exclusion and diagnostic criteria in order to determine eligibility for the study. Subjects will also be screened via an independent third party to determine eligibility.

Adjunctive Therapy: CERC-301 will be administered as an adjunctive therapy to current antidepressant treatment in subjects who have failed to adequately respond to their current therapy. We believe that initially pursuing approval as an adjunctive treatment addresses a key unmet medical need while enhancing our ability to achieve appropriate level of pricing, formulary access and reimbursement.

Summary of Prior Clinical and Preclinical Studies

Clinical Studies

Clin301-201: A Randomized, Double-Blind, Placebo-Controlled, Sequential Parallel Study of CERC-301 in the Adjunctive Treatment of Subjects with Severe Depression and Recent Active Suicidal Ideation Despite Antidepressant Treatment

Clin301-201 randomized 137 subjects to evaluate safety and efficacy of an 8 mg dose of CERC-301 for 28 days using a sequential parallel comparison design, or SPCD design. The primary endpoint of the study was to evaluate the antidepressant effect of CERC-301 after seven days of treatment assessed by the HAMD-17. Secondary endpoints were to evaluate the sustained antidepressant effect defined as the average between seven and 28 days of study drug treatment and the antidepressant effect of CERC-301 after 28 days of treatment assessed by the HAMD-17. In accordance with the SPCD experimental paradigm, subjects were randomized to one of three treatment sequences: 28 days of CERC-301 followed by seven days of placebo (12 mg loading dose on day 0 followed by 8 mg dose for 28 days), seven days of placebo followed by 28 days of CERC-301, or 35 days of placebo. While there was a slight numerical superiority for CERC-301 for the seven day primary endpoint, the results failed to reach statistical significance. There was no evidence for antidepressant effect at the 28 day endpoint, while numerical superiority for placebo was observed. There were no clinically meaningful or statistically significant changes in plasma BDNF levels with CERC-301 compared with placebo. There were no differences in mean blood pressure effects or heart rate between the treatment groups. We believe the lack of significant changes in plasma BDNF levels and blood pressure effects suggest drug exposure was inadequate in this study and that higher exposures should be explored in future studies. Additionally, we believe that refining our patient selection and changing our primary efficacy endpoint will improve the probability of producing positive future study results.

In general, CERC-301 was well tolerated with rates of adverse events similar to that of placebo. The most common treatment emergent adverse events were nervous system disorders, occurring in 25.9% and 26.9%, respectively, of subjects in the two active treatment sequences compared to 22.4% of subjects who received placebo during the entire study. Of the nervous system treatment emergent adverse events, dizziness was most common, occurring in 18.5% and 7.7%, respectively, of subjects in the two active treatment sequences compared to 2.0% of subjects who received placebo during the

entire study. There was no difference in mean blood pressure effects in active groups compared to the placebo group. There was no detectable pattern of blood pressure increase either at pre-dose clinic measurements or transiently after dosing. Four serious adverse events in three subjects were reported during the conduct of the study, two in a subject randomized to placebo (suicide attempt; alcoholism) and two in subjects that received CERC-301 (worsening depression with psychotic features and unstable angina).

Clin301-200-A: A Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Two-Part Safety, Pharmacokinetic, and Pharmacodynamic Study of CERC-301 in Healthy Subjects

In the fourth quarter of 2014 we completed a 48-subject, three-part, seven day, inpatient exploratory study of CERC-301. The study investigated the dose-response relationship between CERC-301 and pharmacodynamic effects on blood pressure and BDNF in healthy subjects, including young, intermediate and elderly cohorts, and provided the repeat dose response data needed to support studies of CERC-301 at possibly higher doses and in larger, more diverse subject populations. Doses of 8 mg to 20 mg were administered in an inpatient setting to better understand the relationship among dose, plasma concentrations and adverse event profile, and to assess potential effects of subject age and gender. The study demonstrated near linear PK profile for CERC-301 with doses up to 20 mg daily in fed-state subjects being well tolerated. Some of the most commonly reported adverse events across the young dose groups were headache, feeling of relaxation, feeling abnormal, elevated mood, dizziness, increased energy, longorrhea, sedation, abnormal vision and palpitations. Overall, there were no clear-cut dose-related or age-related differences in adverse events. Relative to placebo, subjects who received CERC-301 demonstrated an increase in blood pressure, as measured by ambulatory blood pressure measurements, at all dose levels and experienced a trend of increased average 7-day BDNF levels at 16 mg and 20 mg. Blood pressure appeared to have the biggest change in the first four days of dosing for all doses, except for the 20 mg dose, which increased further from Day 4 to Day 7, consistent with CERC-301 exposure profile, which reaches steady state values by day five or six of dosing. Relative to placebo, the mean awake time ambulatory systolic blood pressure changes were £ 8 mm Hg on average across all doses on days one, four and seven, except in the 20 mg group, where on average there was a 9-15 mm Hg elevation in systolic blood pressure. There was no apparent age effect on blood pressure elevations across the three age groups and this study demonstrated no clear difference between genders across various cohorts. Ambulatory blood pressure measurements demonstrated that the maximum change generally occurred between two and three hours post-dose, consistent with CERC-301 peak plasma exposure in fed-state. We believe that these blood pressure results will be transient in our CLIN301-203 study as a result of the revised dosing schedule.

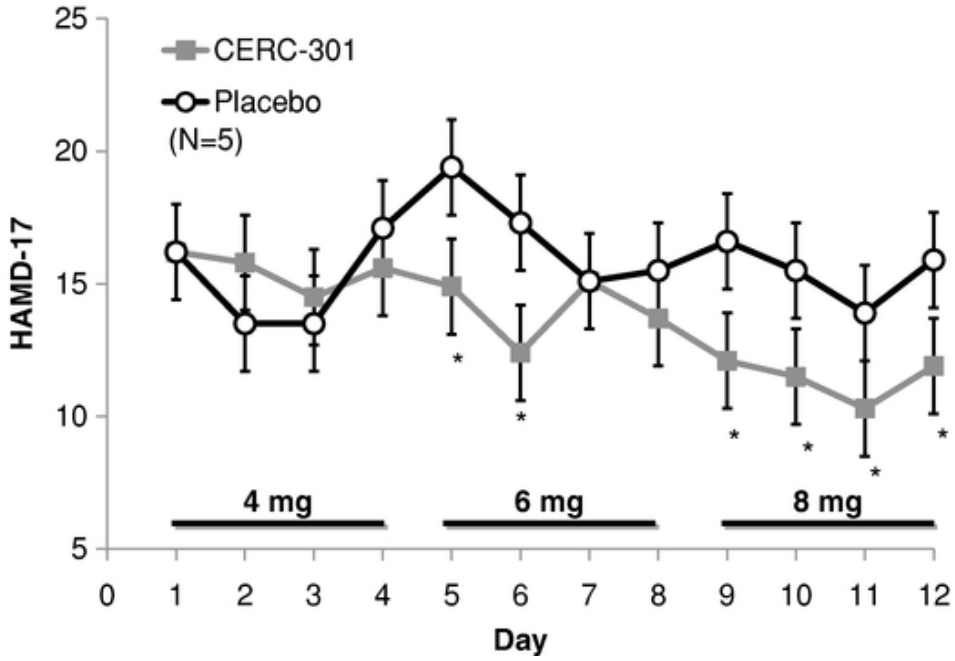
Human Proof of Concept Study in Treatment Resistant Depression

The 2012 NIMH Study was a single center, randomized, double-blind, placebo-controlled crossover study of five subjects with TRD to evaluate the potential antidepressant efficacy and tolerability of CERC-301. It was conducted at the Clinical Research Center of the NIMH-NIH, where subjects were hospitalized for the duration of the study. Male and female subjects of the NIMH, ages 18 to 55 years, were recruited to participate; all subjects were diagnosed with MDD and were currently depressed without psychotic features. Subjects were required to have a score of 22 or higher on the Montgomery-Asberg Depression Rating Scale, or MADRS, at screening and at baseline, the day of first dose of study medication. In addition, subjects had to have previously failed at least two adequate antidepressant trials in the current depressive episode. Exclusion criteria included, but was not limited to, a recent history of drug abuse, diagnosis of bipolar disorder, psychotic features, suicidal ideation, serious unstable medical disorder or condition, previous use of ketamine or phencyclidine, and concomitant treatment with psychotropic medications in the two weeks before the study or electroconvulsive therapy in the three months before the study.

Following a one week drug-free period, five subjects were randomized in a double-blind manner to receive either CERC-301 or placebo for 12 days. Initial doses were 4 mg/day of CERC-301 for four days, then escalated to 6 mg/day for four days and then 8 mg/day for four days. The study's medication dose was increased in a blinded fashion every four days until completion of the treatment. At day 12, the study drug was discontinued; subjects remained drug-free for 14 days and then crossed over to the other treatment condition. Dosage in the second experimental treatment condition (days 27 through 38) was identical to the first crossover phase. By day nine, plasma BDNF levels were significantly higher in subjects receiving CERC-301 than in those receiving placebo, with p = 0.03. The results of a clinical trial are statistically significant if they are unlikely to have occurred by chance. Statistical significance of the trial results are typically based on widely used, conventional statistical methods that establishes the p-value of the results. A p-value of 0.05 or less is required to demonstrate statistical significance. As such, these BDNF levels are considered to be statistically significant.

CERC-301 demonstrated significant antidepressant effects as early as day five and nine compared to placebo, in two of the three standard scales used in assessing antidepressant response, the HAMD-17 (p=0.001) and Beck Depression Inventory, or BDI (p = 0.01) respectively. These two scales were two of the study's secondary endpoints. There were no significant adverse side effects observed, including changes in blood pressure. No improvement was noted with the third antidepressant scale, the MADRS, which was the primary efficacy parameter of the study. The following chart illustrates the results on the HAMD-17 antidepressant response scale:

Treatment effect emerged after 6mg daily dose and was sustained



Additional Phase 1 Studies: In 2004 through 2005, three Phase 1 clinical trials of CERC-301 in a total of 60 healthy volunteers receiving the study drug, were completed by Merck, each of which measured the safety and assessed the pharmacokinetics, or PK, of CERC-301. The first study, Study 001, measured single doses of the drug in a healthy, fasted and fed and young male population. The second study, Study 002, measured multiple doses in a healthy, fed and young male population. The final study, Study 003, measured single doses in healthy elderly male and female populations.

CERC-301 was generally well tolerated, with the exception of dose-related increases in blood pressure, increases in orthostatic heart rate in three subjects, a mild decrease in blood pressure in one subject, and some adverse events of which central nervous system-related adverse effects were most common. Such adverse events were transient and mild to moderate in severity. No serious adverse effects were experienced in these studies. In subjects who received the highest dose of 20 mg while fasting, adverse events such as mild forgetfulness, dizziness, drowsiness, headache, lightheadedness, and difficulty concentrating were observed. Further, no clinically significant abnormalities were noted in respiratory rate, routine blood and urine chemistry panels, electrocardiogram tests, or physical examinations, including neurologic examinations.

Two additional Phase 1B studies were completed in subjects with moderate Parkinson's disease, for a total of 38 subjects, which did not show efficacy to control movement disorders. However, while some non-serious adverse events were found, contrary to what was observed in earlier studies, both studies, at single doses of 7 mg in the fed state, showed no clinically significant blood pressure elevations compared to placebo.

Preclinical Studies

Preclinical studies conducted by Merck include the evaluation of safety pharmacology, PK and toxicology of CERC-301 in conscious animals, all of which have demonstrated a safety profile sufficient to enable ongoing and planned human clinical studies. The engagement of CERC-301 with brain NR2B, or target engagement, has also been demonstrated in rats, dogs, monkeys and in human cadaver tissue. The predicted blood exposure required to achieve target engagement has been described in these species. Live animal model studies have provided promising support for CERC-301's efficacy in treating Parkinson's disease related movement disorders, chronic pain and depression. In 2014, we conducted a Forced Swim Test, or FST, study that is a validated animal model of clinical MDD that demonstrates predictive validity for all known classes of effective antidepressants. Antidepressant-like activity is indicated by reductions in immobility. We tested doses of CERC-301 at 0.1, 0.3, 1, 3, 10, or 30 mg/kg and determined that CERC-301 exhibited antidepressant effects at the 1, 3, 10, and 30 mg/kg dose levels compared to the vehicle. Additional preclinical studies are ongoing.

Future Clinical Development

Upon completion of Clin301-203, and dependent upon study results, we will conduct a multi-dose, six week Phase 2b study as adjunctive treatment in subjects with MDD who are currently experiencing a severe depressive episode despite stable ongoing treatment with a SSRI or SNRI. We expect to initiate this dose ranging study in the first half of 2017. Thereafter we plan to engage the FDA in an end-of-phase 2 meeting to align plans and activities for potential regulatory approval which would include Phase 3 clinical studies, non-clinical NDA enabling studies and manufacturing activities.

CERC-501

Adjunctive Treatment of Major Depressive Disorder, Substance Use Disorders, & Treatment of Co-Occurring Disorders

We intend to first develop CERC-501 for adjunctive treatment of MDD and for substance use disorders (e.g., nicotine, alcohol, and/or cocaine). If we receive approval for CERC-501 for adjunctive treatment of MDD and for substance use disorders, we plan to further develop CERC-501 for the concurrent treatment of MDD and substance use disorders, or co-occurring disorders.

Adjunctive Treatment of Major Depressive Disorder

Depression is one of the most common serious medical and psychiatric disorders, with greater than 150 million adults worldwide suffering from MDD at any given time, according to a 2003 report by the World Health Organization, or WHO, titled *Investing In Mental Health*. According to the U.S. National Comorbidity Survey Replication published in 2007, or the NCS-R, more than 16 million adults in the United States, which represents approximately 6.7% of its entire adult population, will suffer from a MDD episode in a 12 month period. Furthermore, according to the NCS-R, approximately 45% of these cases can be classified as severe, and suicide is often a grave complication associated with depression. Studies have shown that approximately 50% to 70% of severely depressed patients have experienced suicidal ideation.

Numerous studies have shown that many patients do not respond to their initial antidepressant therapy. For example, according to a 2006 report titled *Acute and Longer-Term Outcomes in Depressed Outpatients Requiring One or Several Treatment Steps: A STAR-D Report*, or the STAR-D Report, 51.4% of patients failed to respond, defined as achieving a 50% reduction in symptoms, and only 36.8% became symptom free, or achieved remission, after their initial 12-week treatment course with monoamine antidepressants. As such, physicians commonly will switch patients' antidepressants to manage depression, and patients may require two or three courses of treatment, before achieving satisfactory relief. The depression may persist following a course of treatment and additional medications may need to be used adjunctively. These adjunctive agents may include atypical antipsychotics, like aripiprazole and quetiapine, or other agents such as buproprion and lithium. While certain patients experience improvement in their depressive symptoms when these additional therapies are added to their existing treatments, many do not. For example, according to a study published by Dr. Robert Berman and others in 2007, entitled *The Efficacy and Safety of Aripiprazole as Adjunctive Therapy in Major Depressive Disorder: A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study*, only 32.4% of patients with treatment resistant depression responded to six weeks of adjunct treatment of the atypical antipsychotic aripiprazole.

Substance Use Disorders

Drug abuse is a major public health problem that impacts society on multiple levels. According to *Results from the 2013 National Survey on Drug Use and Health*, a survey conducted by the Substance Abuse and Mental Health Services Administration, in 2013, an estimated 21.6 million persons in the United States aged 12 or older (8.2 percent) were classified with substance dependence or abuse in the past year based on criteria specified in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition. Of these, 2.6 million were classified with dependence or abuse of both alcohol and illicit drugs, 4.3 million had dependence or abuse of illicit drugs but not alcohol, and 14.7 million had dependence or abuse of alcohol but not illicit drugs. Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics (pain relievers, tranquilizers, stimulants, and sedatives) used nonmedically. Furthermore, in 2013, heavy drinking was reported by 6.3 percent of the population aged 12 or older, or 16.5 million people.

Cigarette smoking and exposure to tobacco smoke are the leading causes of preventable disease and death in the United States, resulting in more than 480,000 premature deaths and $289 billion in direct health care expenditures and productivity losses each year. In 2013, 55.8 million persons (21.3 percent of the population) were current cigarette smokers. Despite progress over the past several decades, millions of adults still smoke cigarettes, the most commonly used tobacco product in the United States, and this continues to be major public health problem.

Co-Occurring Disorders

Without considering nicotine dependence, there are more than 5 million adults in the United States alone who suffer from co-occurring depression and substance use disorders. Such comorbidities

put patients at greater risk. For instance, depending on when MDD onset occurs, MDD has been found to be related to the course of substance dependence, impacting areas such as remission of substance dependence and relapse into substance dependence after stable remission. Recent research suggests that a history of MDD is associated with a decreased ability to quit smoking and MDD over the last year is associated with an increased likelihood of smoking relapse. One common link between the co-occurrence of depression and substance use disorders may be stress. Sustained stressful experiences can induce despair and increase the risk of clinical depression and substance use. Stress and mood are significant components of addiction relapse as discussed in a 2000 article written by Watkins et al., titled *Neural Mechanisms Underlying Nicotine Addiction: Acute Positive Reinforcement and Withdrawal* published by the Journal of Nicotine & Tobacco Research. Substance use often provides relief from stress, such that the substance of abuse often becomes a potent behavioral reinforcer. Present pharmacologic treatments for co-occurring disorders consist either of treatment for the psychiatric disorder or the treatment for the addiction, but not the treatment of the underlying connection between the two. For example, the nonselective opioid antagonist naltrexone, an FDA-approved medication for alcohol dependence in patients who are able to abstain from alcohol in an out patient setting prior to treatment initiation, is not FDA approved as an antidepressant or an antianxiety agent. The smoking cessation aid varenicline, a mixed nicotinic agent, is associated with depression as a serious side effect. Similarly, antidepressant medication exerts a modest beneficial effect for patients with combined depressive and substance-use disorders. It is not a stand-alone treatment, and concurrent therapy directly targeting the addiction is also indicated, according to a 2004 review written by Nunes and Levin titled *Treatment of Depression in Patients with Alcohol or Other Drug Dependencies: A Meta-analysis,* published in the Journal of the American Medical Association (JAMA). Therefore, we believe a tremendous need exists for pharmacotherapies effective in the treatment of co-occurring disorders.

Mood, Stress, Addiction and Kappa Opioid Receptors

Kappa opioid receptors, or KORs, and their native ligand dynorphin are localized in areas of the brain which effect reward and stress and are believed to impact mood, stress and addictive disorders. As discussed in a paper by Shippenberg et al., titled *Dynorphin and the Pathophysiology of Drug Addiction* and published in the Journal of Pharmacology and Therapeutics in 2007, both KORs and dynorphin, together comprising the kappa opioid system, are upregulated by stress and chronic exposure to drugs of abuse, are thought to mediate the negative emotional states seen in drug withdrawal and contribute to stress-induced reinstatement of drug seeking behavior. In animal models it has been observed that stress produces a depressive state that is believed to be associated with the activation of KOR and subsequent downstream signaling events. Administration of agents that stimulate the KOR system, or KOR agonists that act like dynorphin, decrease dopamine levels in areas of the brain involved with executive function, produce anxiety-like and depression-like behaviors in animals, exacerbate behaviors associated with drug withdrawal and increase the reinforcing effects of substances of abuse.

KOR Antagonism

Much of the current knowledge of the kappa opioid system comes from studies of two prototypical KOR antagonists, nor-BNI and JDTic. In studies, such as those discussed by Lalanne et al. in a paper titled *The Kappa Opioid Receptor from Addiction to Depression and Back* and published in Frontiers in Psychiatry in 2014, KOR antagonists induced antidepressant-like effects in animal models and attenuate symptoms associated with withdrawal, such as anxiety behaviors. The therapeutic potential of KOR antagonism has been demonstrated in animal models of anhedonia, depression, and anxiety, and KOR antagonists reduce the signs of nicotine, heroin and alcohol withdrawal in rodent models of dependence. Based on the results of these studies, stress-induced reinstatement to drug seeking is blunted in mice who have their KOR system genetically deleted, and can also be blocked in wild-type

mice by treatment with nor-BNI and rats treated with JDTic. Based on the studies summarized by Lalanne et al., KOR antagonists reduce ethanol intake in a number of animal models. Overall, we believe the preclinical data to date support the emerging consensus that selective kappa opioid antagonists have antidepressant- and antianxiety- like effects, reduce addictive substance consumption, and reduce behaviors and signs of drug withdrawal. As these studies demonstrate efficacy in animal models of both mood and addictive disorders, we believe that these studies provide the basis for the use of KOR antagonists in mood and substance use disorders and have the potential to reduce co-morbid mood disorders.

We believe that the rationale for CERC-501 as an adjunctive treatment of MDD is supported by the reported results for Alkermes' ALKS-5461, which is believed to be acting as a functional kappa antagonist. Alkermes has reported positive Phase 2 results for ALKS-5461 as an adjunctive antidepressant in MDD patients and has initiated a Phase 3 development program. According to a press release by Alkermes, "ALKS 5461 had an onset of effect, as measured by MADRS, evident after one week of treatment." This suggests a rapid response to antidepressant treatment but not as rapid as what has been reported in the ketamine depression clinical trials.

Our Solution

In February 2015, we acquired rights to CERC-501, which was previously referred to as LY2456302 and OpRA Kappa, through an exclusive, worldwide, license from Eli Lilly and Company, or Lilly. CERC-501 is a high-binding, selective KOR antagonist. We believe that the availability of a highly selective, potentially well tolerated oral daily kappa antagonist like CERC-501 represents a unique drug development opportunity for substance use disorders, adjunctive treatment of MDD and potentially for co-occurring disorders. We believe CERC-501 may have the following advantages over conventional antidepressant and addiction therapies:

- highly specific and selective to KOR and, therefore, minimal off-target pharmacology;
- available in convenient, once-a-day oral dosing;
- rapid onset of action;
- potential efficacy against substance use disorders;
- potential efficacy against mood disorders; and
- potential ability to treat co-occurring disorders.

In the long term, we currently intend to target our development efforts at the treatment of co-occurring disorders, an under-served segment of patients. We believe competitively positioning CERC-501 as a treatment for substance use disorders, a once-a-day, oral adjunctive treatment of MDD, and, depending on marketing approval, a treatment for co-occurring disorders it has the potential to generate widespread market acceptance. We further believe that if CERC-501 has the ability to provide rapid onset of antidepressant effect, the market opportunity will be further expanded. As discussed below, we plan to leverage the external studies funded and conducted by third parties with our own internally funded clinical studies.

Our Program

Current Development Plan

Our long term strategy is to develop CERC-501 as an adjunctive treatment of MDD, substance use disorders, and, depending on market approval, the treatment of co-occurring disorders. For approximately the next 24 months, we will evaluate the potential human utility of CERC-501 in smoking dependence, depression, cocaine dependence, and anhedonia and mood disorders based upon studies conducted by us and three studies conducted by third parties at academic centers, two of which are being conducted under the auspices of NIMH. We will be submitting the smoking study to the

FDA, which we refer to as Clin501-201 in the third quarter of 2015 and initiate the study in first half of 2016. In addition we are considering conducting a Phase 2 clinical study in inadequately treated subjects with MDD currently on antidepressants, with an initiation date in the second half of 2016.

Study Clin501-201: A Randomized, Double-Blind, Placebo-Controlled, Crossover Design Study of CERC-501 in a Human Laboratory Model of Smoking Cessation.

Study Overview: Clin501-201 is designed as a randomized, placebo-controlled double blind cross-over human laboratory study to evaluate the effects of 5 mg and 10 mg of CERC-501 on tobacco withdrawal and reinstatement and assess craving, mood and anxiety during 18 hours of abstinence in approximately 86 cigarette smokers who currently smoke at least 15 cigarettes per day. Clin501-201 uses a placebo and a crossover design with two periods. We believe that the cross-over design, by allowing for subjects to be their own control, significantly increases trial power as does the conduct of the study in a controlled laboratory environment.

Study Design: Clin501-201 consists of two periods. After the screening period of up to 21 days, subjects will be randomized in a 1:1 manner to one of two treatment regimens, 5 mg or placebo, or 10 mg or placebo. Each period consists of a seven day treatment period followed by a single testing day on Day 8. Subjects will participate in a laboratory session following the McKee Smoking Lapse Test and will be discharged from the clinic to undergo drug washout followed by the second period of the cross-over design. The McKee Smoking Lapse Test involves nicotine deprivation for 18 hours, beginning on the evening of the seventh day, and continuing to mid-day of on the eight day, followed by a delay period, 50 minutes in duration, and a self-administration period, 60 minutes in length, as described in more detail below. After screening, participants will be randomized to arm 1, consisting of placebo and 5 mg CERC-501, or arm 2, consisting of placebo and 10 mg CERC-501. Half of the participants in each arm will be randomized to receive placebo first and half will receive CERC-501 first.

The smoking lapse test involves assessment of tobacco craving, mood ratings and nicotine withdrawal after 18 hours of abstinence followed by the delay period where subjects are presented with a tray containing their preferred brand of cigarettes, a lighter, and an ashtray. Subjects will be instructed that they can begin smoking at any point over the next 50 minutes. However, for each five minute block of time a subject delays smoking, the subject will receive a financial reward. The time will be recorded when a subject announces that the subject wants to smoke. After their first cigarette or the completion of the delay period, a standardized scale known as the modified Cigarette Evaluation Questionnaire (mCEQ), will be administered to assess satisfaction, psychological reward, craving relief, enjoyment of airway sensations and other subjective effects associated with smoking. Upon smoking the first cigarette or completion of the delay period, the smoking self-administration period begins, and lasts 60 minutes. Subjects will be provided with eight cigarettes of their preferred brand. Money earned for delaying smoking will be paid to the subjects at the end of each laboratory session. The number of cigarettes smoked will be recorded. The primary endpoints for the study are the number of minutes (latency) to start of tobacco use during the delay period and the number of cigarettes smoked during the self-administration period.

Upon completion of the McKee Smoking Lapse Test, subjects will be discharged and begin a seven day washout period, although a three day window has been included to allow for subjects to remain in the study if they have an emergency or a planned vacation or other activity that would not allow them to make the exact visit date. Subjects will then return to the clinic to begin the second period of the cross-over design to receive placebo or active, with 5 mg or 10 mg, respectively, and repeat the above procedures and assessments. Upon discharge from the unit after the second period, subjects will be instructed to return for a final follow-up visit seven days later.

Enrollment Strategies: The study will be performed in volunteer subjects who are cigarette smokers currently not seeking treatment, who currently smoke at least 15 cigarettes per day, and smoke within five minutes of awakening every day. Recruitment is planned to be primarily through advertising.

Subjects will be compensated for their participation in the study. The study will be performed at up to four sites that will contribute to enrollment. Strategies that we believe may maximize retention include dividing the screening procedures into two separate visits that allow the site to meet with subjects on unique occasions and gain an understanding of their reliability and commitment to the study before randomizing.

Overview of Externally Funded and Conducted Studies

In connection with our in-license of CERC-501 from Lilly, we expect to receive the results upon the completion of three clinical trials that are enrolling subjects or will begin enrolling subjects by the end of the end of 2015. All of these studies are funded by grants from the NIMH or self-funded without any cost to us. The following is a summary of each of the three clinical trials:

- *Impact of the KOPr Antagonist OpRA Kappa in Persons at Specific Stages of Cocaine Addiction Trajectory, Versus Normal Volunteers*. This single site study, which began in September 2014, is being conducted under the leadership of Mary Jeanne Kreek, MD, Professor and Head of Laboratory, The Rockefeller University, and Senior Physician, The Rockefeller University Hospital.

- *Double-Blind, Placebo Controlled, Proof-of-Concept (POC) Trial of LY2456302, a Kappa Selective Opioid Receptor Antagonist, and Augmentation of Antidepressant Therapy in Treatment-Resistant Depression.* The primary investigator for this 5-site study, which has begun to recruit subjects, is Maurizio Fava, MD, Executive Director, MGH Clinical Trials Network and Institute and Executive Vice-Chair, Department of Psychiatry, Massachusetts General Hospital.

- *A Phase 2a Study to Evaluate the Kappa Opioid Receptor As a Target for the treatment of Mood and Anxiety Spectrum Disorders by Evaluation of Whether LY2456302 Engages Key Neural Circuitry Related to the Hedonic Response.* Dr. Andrew Krystal of Duke University Medical Center serves as the principle investigator of this 6 site study, which is expected to begin by the end of 2015.

Under clinical research agreements between Lilly and the third party research institutions conducting each of the clinical trials listed above, Lilly has the right to receive the results of each clinical trial. We are in the process of entering into tri-party agreements with Lilly and each third-party research institution so that we may be assigned the clinical research agreements. We have executed a tri-party agreement with Duke University and Lilly whereby we are assigned all of Lilly's rights and obligations under the clinical research agreement with Duke University. We are pursuing a similar agreement with MGH Clinical Trials Network and Institute and plan to propose a similar arrangement with The Rockefeller University Hospital.

In addition, there was a previously planned Phase 1 study of CERC-501 receptor occupancy to be conducted by Dr. Andrew Krystal of Duke University Medical Center and funded by NIMH. NIMH recently decided to discontinue the funding as it decided that the study would be unlikely to provide new information beyond what the above discussed NIMH funded Phase 2a study will provide. Depending on the results of Phase 2 studies for CERC-501, we may consider sponsoring this study or supporting the conduct of this study by a third party.

Summary of Prior Preclinical and Clinical Studies

Phase 1 Studies

In 2008 through 2011, three Phase 1 clinical trials of CERC-501 in an aggregate of 82 healthy volunteers were completed by Lilly, each of which measured the safety and assessed the PK and PD of CERC-501. Study A was the first-in-human study of single escalating oral doses of CERC-501 administered to 32 healthy subjects and provided safety and PK data. The second study, Study B, assessed repeated daily doses of CERC-501 in 37 healthy subjects utilizing a dose range based on the results of Study A. Potential PK and cognitive interactions between CERC-501 and alcohol were also

investigated in Study B. Study C was conducted in 13 healthy male subjects to confirm the interaction of single oral doses of CERC-501 of between 0.5 mg to 25 mg with KORs in the brain, using positron emission tomography, or PET, imaging. The combined results of Studies A and C identified the doses at which CERC-501 provides KOR inhibition without mu opioid receptor, or MOR, inhibition, thus confirming the doses at which the drug remains KOR selective. The combined results from Study A and Study B suggested that CERC-501 was generally well tolerated by the healthy subjects administered up to 60 mg as a single dose, and up to 35 mg as multiple doses administered once daily for 14 days. One subject in Study B experienced a transient, clinically significant increase in ALT (liver transaminase) approximately two weeks after her last dose of 10mg of study drug. There were no serious adverse events observed in either study that were attributed to the study drug and no dose-limiting adverse events or other safety variables that were attributed to the study drug. The dose escalations in both studies were not limited by any safety findings. There were no clinically significant changes in neurohormones, including cortisol, prolactin, adrenocorticotropic hormone, and luteinizing hormone in either studies, consistent with pre-clinical toxicology studies that revealed no evidence of hypothalamic or pituitary hormonal toxicities. The estimated PK parameters after single doses of CERC-501 were reasonably consistent across both studies. In Study B, CERC-501 had no effect on ethanol-induced cognitive/motor impairment.

In Study C, PET imaging was conducted and demonstrated that single oral doses of 0.5 mg to 25 mg of CERC-501 blocked KOR in the brain. KOR occupancy, or RO, was measured in high uptake regions of the brain, including amygdala, anterior cingulate, frontal cortex, and insula, at two time-points post-dose, approximately 2.5 hours post-dose and on the second day at around 22.5 hours post-dose. Consistent with preclinical studies, single oral doses of CERC-501 demonstrated rapid penetration and potent receptor occupancy in healthy human subjects, with 74% to 100% KOR occupancy at doses of 2 mg to 25 mg. Study C demonstrated that a single oral dose of 10 mg CERC-501 almost completely saturated kappa receptors at 2.5 hours post-dose, and that the lower range of RO at 22.5 hours post-dose exceeded 60%, supporting the clinical exploration of doses < 10 mg in future studies. Overall, clinical studies to date demonstrate that CERC-501 selectively blocks KOR without evidence of significant MOR antagonism within the dose range of 4 mg to 10 mg in humans, and the studies also suggest such dose levels may present a favorable safety profile. A limited number of the adverse effects observed in Studies A, B and C were considered by the investigators to be related to CERC-501. Additionally, there were no clinically significant changes in vital signs or electrocardiogram in the studies attributed to the study drug.

Preclinical Studies

Completed preclinical studies of CERC-501 include the evaluation of safety pharmacology, PK and toxicology of CERC-501 in conscious animals, all of which have demonstrated a safety profile sufficient at the intended dose to enable ongoing and planned human clinical studies. Our preclinical studies have revealed some limited safety findings, such as rat gastrointestinal issues, which we are further investigating. The engagement of CERC-501 with brain KORs, or target engagement, has also been demonstrated in rats and monkeys and the sufficient blood exposure required to achieve target engagement has been described in these species. To date, two preclinical studies in nicotine withdrawal, one in depression, and two in alcohol dependence have demonstrated efficacy, two of which are described below.

A standardized model of nicotine dependence involves infusion of nicotine via an attached pump into mice, discontinuation of the infusion is representative of spontaneous nicotine withdrawal. CERC-501, administered at doses ranging from 1 to 10 mg/kg reduced nicotine withdrawal behaviors in a dose-related manner, achieving statistical significance at 10 mg/kg. CERC-501 non-significantly decreased hyperalgesia at all doses tested and non-significantly decreased anxiety-like behavior in nicotine-withdrawn mice at 3 and 10 mg/kg. In a FST study, CERC-501 reduced swimming immobility,

a measure of depression-like behavior in a dose-dependent manner, with 10 mg/kg achieving efficacy comparable to the tricyclic antidepressant imipramine.

Future Clinical Development

Upon completion of Clin501-201, provided the results are indicative of potential efficacy and safety, we plan to conduct a dose ranging Phase 2b study in nicotine dependent smokers. In addition we are considering conducting a Phase 2 clinical study in inadequately treated subjects with major MDD currently on antidepressants. We will also monitor the results from the three externally funded and conducted future studies and based on the outcome of those clinical trials determine the merits of pursuing indications for adjunctive treatment of MDD, substance use disorders, and, depending on marketing approval, the treatment of co- occurring disorders. We also plan to engage the FDA in an end-of-Phase 2 meeting to align plans and activities for potential regulatory approval which would include Phase 3 clinical studies, non-clinical NDA enabling studies and manufacturing activities.

COMTi Platform

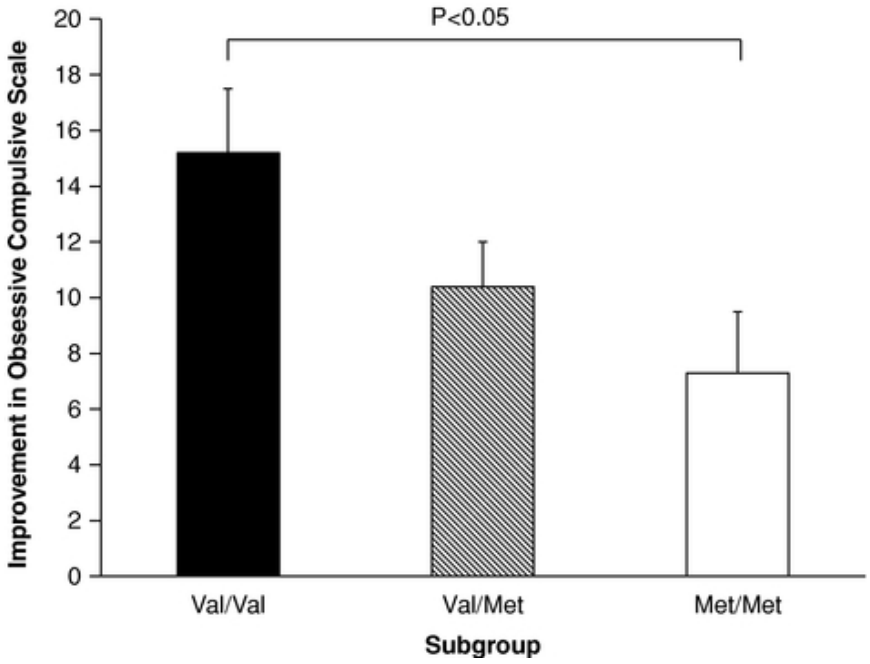
In March 2013, we acquired rights to our COMTi platform by means of an exclusive, worldwide license from Merck. COMT is an enzyme that is critical for the inactivation and metabolism of dopamine and its inhibition in the brain has demonstrated applicability in treating subjects with neuropsychiatric conditions, including MDD, schizophrenia, Parkinson's disease and pathological gambling. The COMTi platform includes access to a library of approximately 1,800 compounds that we believe increase dopamine levels in the prefrontal cortex, or PFC, which is the region of the brain that is responsible for working memory, attention tasks and decision making, all of which are human attributes that we collectively refer to as executive function. In January 2015, we selected CERC-406 as our first preclinical lead candidate from the COMTi platform. In 2015 and 2016, we intend to establish the data set necessary to select additional preclinical lead candidates and to initiate programs for treatment of various conditions where impaired executive function is a core symptom. These programs will target the improvement of working memory and executive function, which are key components of cognition.

COMT Overview

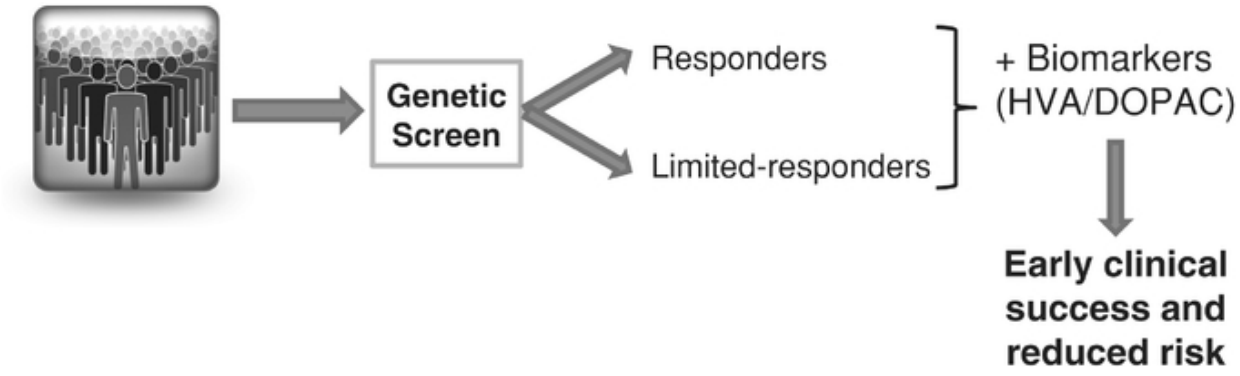
We believe the neurotransmitter systems that are involved in executive function are targets for drug development, and include acetylcholine, serotonin, dopamine, glutamate and histamine. Most of these targets have a wide ranging impact on different brain functions or areas, and, as such, most drug development efforts are fraught with the lack of specificity of clinical effect of the drugs tested. On the other hand, higher-order cognitive functions, which impact areas such as thought, are governed by dopamine in the PFC. COMT is thought to break down dopamine and regulate dopamine levels in the PFC and we believe that brain COMT inhibition is a preferred target for treatment of cognitive impairment in conditions where loss of executive function is a key symptom. Specifically, COMT inhibition has demonstrated applicability in the significant improvement of aspects of executive function in persons suffering from schizophrenia, Parkinson's disease and pathological gambling.

We believe brain COMT inhibition is a target with two key attributes that enable drug development—genetic variability and the availability of biomarkers. A genetic variation in the COMT enzyme, the Val allele, enhances the enzyme's baseline level activity and has been shown to be linked to reduced aspects of executive function in normal volunteers and in disorders associated with cognitive impairment. Research has suggested that the Val allele may be linked to reduced working memory and PFC physiological efficiency as assessed through brain imaging and increased response to a currently available COMT inhibitor, tolcapone. We believe these results suggest that COMT inhibition may improve PFC executive function in a genotype-specific and more predictable manner. This represents an opportunity to improve cognitive symptoms in patients with various diseases associated with executive dysfunction and who carry this genetic subtype. Support of this concept of stratification of

subjects by genotype, or pharmacogenomic approach, is found in a 2013 article titled *A Proof of Concept Study of Tolcapone for Pathological Gambling: Relationships with COMT Genotype and Brain Activation*, which demonstrated that this genotype is predictive of response to brain COMT inhibition. As indicated in the figure below, in this study of pathological gambling, the Val:Val subjects had a significantly improved response when compared to the Met/Met genotypes. By targeting this genotype, we believe we could see a significant improvement in magnitude and reliability of drug response.



The second attribute involves the use of biomarkers to monitor the level of enzyme inhibition by our novel COMT inhibitors. In cerebrospinal fluid, or CSF, the inhibition of COMT leads to an increase in the amounts of dihydroxyphenylacetic, or DOPAC, and a decrease in the amounts of homovanillic acid, or HVA. Samples of CSF are easily obtained in clinical studies via a spinal tap, or lumbar puncture, to measure concentrations of HVA and DOPAC. This allows for immediate measures of central dopamine breakdown. We plan to use these biomarkers in our first clinical trials in order to detect clinical efficacy in Phase 1. By exploiting this biomarker strategy and combining it with a pharmacogenomic approach, we are developing our novel COMT inhibitors as one of the first hypothesis-driven, biology-based, genotype-specific and targeted treatments of the impairment of executive function.



Our COMTi Platform

Our COMTi platform is comprised of a new generation of compounds with selectivity for membrane bound COMT, the dominant form of COMT found within the central nervous system. We believe these potent COMT inhibitors will selectively increase dopamine levels in the PFC, thereby improving executive function. Our development efforts are focused on a new generation of potent inhibitors that we believe avoid off-target toxicity and side effects seen with the previous generation of inhibitors, such as liver toxicity observed in tolcapone and diarrhea observed with entacapone and tolcapone. Our novel compounds are intended to have higher levels of penetration and selectivity for brain COMT, which we believe may lead to higher efficacy with lower administered doses. Our research indicates that our COMTi platform includes compounds with varying degrees of selectivity of peripheral versus brain COMT inhibition, including some that work on both peripheral and brain COMT, and some that work primarily on brain COMT. We believe this provides options for developing different compounds for different disease states. For example, we believe a COMTi for Parkinson's disease may need to provide both central and peripheral inhibition, in order to benefit both to the movement impairments of Parkinson's disease and the cognitive symptoms of the disease.

CERC-406

Residual Cognitive Symptoms in Major Depressive Disorder

Depression is one of the most common serious medical and psychiatric disorders, with greater than 150 million adults worldwide suffering from MDD at any given time, according to the WHO report titled *Investing In Mental Health*. According to the NCS-R, more than 16 million adults in the United States, which represents approximately 6.7% of its entire adult population, will suffer from a MDD in a 12 month period. The WHO, in a report titled *Depression: A Global Crisis*, published on the occasion of World Mental Health Day, October 10, 2012, predicted that by 2020 MDD would be the second leading cause of disability worldwide.

Several publications including the 2014 article by Lam et al., titled *Cognitive Dysfunction in MDD: Effects on Psychosocial Functions and Implications for Treatment* published in the Canadian Journal of Psychiatry indicate that cognitive dysfunction is an important mediator of disability in MDD. Self-perceived cognitive impairment has always been recognized as a clinical manifestation of MDD. Cognitive domains that are measurably impaired in MDD include attention, memory, processing speed and executive function. As discussed by Lam et al., up to 50% of patients with MDD exhibit measureable cognitive deficits. Deficits in attention and executive function may persist even after remission. Cognitive dysfunction and functional impairments are two of the most common residual complaints among patients with MDD who achieve symptomatic remission. In a study of patients with MDD treated with antidepressants for at least three months who were considered to be be in partial or complete remission, 30% to 50% reported residual cognitive symptoms that interfered with functioning. Thus, we believe cognitive dysfunction may represent a dimension of MDD that is independent of mood symptoms. Although standard antidepressants may improve cognitive deficits in MDD, we believe these effects may be limited in magnitude. Furthermore, as summarized in a 2009 article by Delgado and Schillerstrom titled *Cognitive Difficulties Associated with Depression* published in Psychiatric Times there is preliminary evidence indicating that cognitive deficits in MDD patients may predict the failure to respond to antidepressants. We believe there is a subgroup of patients exist who require additional treatment alternatives. According to Lam et.al, accumulating clinical evidence suggests that cognitive dysfunction is a core psychopathological feature of the disorder.

Entacapone and tolcapone are two commercially available COMT inhibitors used to treat aspects of Parkinson's disease. Both drugs inhibit COMT outside of the nervous system, or peripheral COMT, and may be administered, with levodopa, which is the precursor to the neurotransmitter dopamine, multiple times per day. Tolcapone, which has modest brain penetration and inhibits brain COMT, is hampered by side effects including diarrhea and liver toxicity. Entacapone does not penetrate the brain. Because of these factors, neither drug is used clinically to treat executive function impairment. Nonetheless, pilot studies using tolcapone have repeatedly suggested an improvement in aspects of executive function in normal volunteers and in subjects with various conditions that are associated with cognitive impairment. Improvements in aspects of the underlying conditions were also found. In an open-label study published by Dr. Maurizio Fava and others in 1999 entitled *Open Study of the Catechol-O-Methyltransferase Inhibitor Tolcapone in Major Depressive Disorder*, tolcapone significantly improved core depressive symptomatology, including HAMD-17 scores, in a cohort of 21 adult subjects with MDD.

Our Solution

CERC-406 is a small molecule, that research indicates is a selective COMT inhibitor with low inhibitory activity on peripheral COMT. We are currently planning to develop CERC-406 as a "first-in-class," oral adjunctive medication for patients with residual cognitive impairment symptoms suffering from MDD. We selected CERC-406 as our preclinical lead candidate from our COMTi platform because in preclinical testing it demonstrated lower potential of peripheral, off target side effects, rapid absorption and bioavailability, good brain penetration and a favorable dose-dependent biomarker profile in rats. CERC-406 has also demonstrated off-rate on brain COMT that is slower than tolcapone, implying a good duration of effect. Finally, CERC-406 has demonstrated a favorable safety profile in all studies conducted to date. In preliminary studies it appears that CERC-406 may have favorable drug distribution and metabolism properties, suggesting that it has the potential to be administered orally on a once or twice daily basis.

We believe that CERC-406 will:

- demonstrate efficacy as it is a brain penetrant COMT inhibitor with selectivity for MB-COMT to target the PFC dopamine deficit in this patient population;
- be more effective in Val homozygotes population, who have higher levels of COMT activity and lower prefrontal dopamine receptor activation; and
- be safer than existing COMT inhibitors—existing COMT inhibitors are not ideal as such inhibitors have adverse events such as liver toxicity and diarrhea.

Our Program

We are planning to develop CERC-406 for the enhancement of executive function and working memory in MDD, where we believe a new therapy with efficacy in residual cognitive symptoms will be associated with improved functional outcomes. We may also perform early exploratory clinical studies in subjects with high unmet medical needs, such as individuals with depression, schizophrenia, impulse control disorders or Parkinson's disease. While COMT inhibition may eventually find broad use in multiple neurological and psychiatric diseases, we plan to focus on indications where high COMT activity is known to contribute to the disease process and where the Val:Val genotype has already been identified as a vulnerable population in the condition or disease state. We intend to measure the biomarkers of COMT activity and dopamine metabolism in genetically defined cohorts in our initial human studies, thus providing biological proof of concept and dose response data early in clinical development. By exploiting this biomarker strategy and combining it with a pharmacogenomic approach, we are developing our CERC-406 as one of the first hypothesis-driven, biology-based, genotype-specific and targeted treatments of the impairment of executive function.

Current Development Plan

In 2015 and 2016, as part of our pre-IND efforts, we intend to advance the characterization of the safety and efficacy of CERC-406 in pre-clinical animal studies and to advance manufacturing of product for clinical trials. We plan to file an IND for CERC-406 in the first half of 2017. Upon acceptance of this IND filing, we will commence Phase 1 studies to examine human safety, tolerability and pharmacokinetics that will determine suitability for further development. Subsequently, other compounds can be brought into development to target other cognition-related disorders. Alternatively, CERC-406 could be carried forward to target other conditions.

Summary of Preclinical Studies

Preclinical studies on CERC-406 to date have been focused towards demonstration of an acceptable safety, metabolic, and toxicity profile for CERC-406, deeming it qualified for further development and advancement into IND-enabling studies. Preclinical medicinal chemistry synthetic scale-ups, a series of studies related to absorption, distribution, metabolism, excretion, PK characterizations, safety screening for liver toxicity, and target validation with use of cerebrospinal fluid biomarker measurement in rats as proof of concept all have provided supporting data for advancement of CERC-406 towards IND-enabling studies.

Clinical Development Plan

Upon acceptance of CERC-406's IND filing, we will commence Phase 1 studies to examine human safety, tolerability and pharmacokinetics that will determine suitability for further development. Current development with respect to CERC-406 allows us to measure the biomarkers of COMT activity in genetically defined cohorts in our initial human studies, thus providing biological proof of concept and dose response data early in clinical development.

Other Business Development Activities

From time to time we may consider strategic transactions, such as acquisitions of companies, asset purchases and in-licensing of products, product candidates or technologies. Additional potential transactions that we may consider include a variety of different business arrangements, including strategic partnerships, collaborations, joint ventures, business combinations and investments. We believe we have the ability to identify, evaluate and procure valuable product programs that are consistent with our goal of becoming a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders. We plan to continue to leverage these opportunities to expand our product candidate portfolio in a fashion that fits within our core strategy and enhances our overall value.

Intellectual Property

We strive to protect the proprietary technologies that we believe are important to our business, including seeking and maintaining patent protection intended to cover the composition of matter of our product candidates, their methods of use, related technology and other inventions that are important to our business. As more fully described below, we have issued patents covering the compounds and compositions of CERC-301 and CERC-501. We have also filed multiple patent applications directed to COMT inhibitor compounds and methods of use. In 2014 and 2015, we received Notices of Allowance for two U.S. patent applications that broadly and/or specifically cover current compounds of interest within the COMTi Platform, including CERC-406. Both of the allowed U.S. applications issued as patents in 2015. We also may rely on trade secrets and careful monitoring of our proprietary information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

Our success will depend significantly on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, inventions and know-how related to our business, defend and enforce our patents, maintain our licenses to use intellectual property owned by third parties, preserve the confidentiality of our trade secrets and operate without infringing the valid and enforceable patents and other proprietary rights of third parties. We also rely on know-how, continuing technological innovation and in-licensing opportunities to develop, strengthen, and maintain our proprietary position in the field of central nervous system disorders.

The patent positions of biopharmaceutical companies are generally uncertain and involve complex legal, scientific and factual questions. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance. Consequently, we do not know whether any of our product candidates will be protectable or remain protected by enforceable patents. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors. Any patents that we hold may be challenged, circumvented or invalidated by third parties.

Because patent applications in the United States and certain other jurisdictions are maintained in secrecy for 18 months, and since publication of discoveries in the scientific or patent literature often lags behind actual discoveries, we cannot be certain of the priority of inventions covered by pending patent applications. Moreover, we may have to participate in interference proceedings declared by the United States Patent and Trademark Office, or USPTO, or a foreign patent office to determine priority of invention or in post-grant challenge proceedings, such as oppositions, that challenge priority of invention or other features of patentability. Such proceedings could result in substantial cost, even if the eventual outcome is favorable to us.

The patent portfolios for our most advanced programs are summarized below.

- ***CERC-301.*** We possess worldwide exclusive rights to manufacture, use and sell certain NR2B antagonist compounds. The CERC-301 patent portfolio consists of three patent families. The first family consists of patents that have issued in the United States, Australia, Canada, Germany, France, Great Britain, Switzerland and Japan. The patents in the first family include composition of matter and use claims of varying scope, including picture claims to CERC-301 or a pharmaceutically acceptable salt thereof. The expiration date of the U.S. patent in the first family is August 31, 2026, not including any patent term extension or market exclusivity period which may apply. The second family consists of patents that have issued in the United States, Germany, France and Great Britain. The patents in the second family include composition of matter claims (in U.S. patent only) and use claims that generically cover CERC-301. The expiration date of the U.S. patent is June 3, 2022, not including any potential patent term extension or market exclusivity period. The third family consists of a U.S. provisional patent application which includes claims to compositions of matter, methods of use, and methods of manufacture. U.S. nonprovisional and international patent applications that claim priority to the provisional application are expected to be filed by December 2015. Any patent issuing from any such U.S. nonprovisional application is predicted to expire in 2035 at the earliest, not including any potential patent term extension or market exclusivity period.

- ***CERC-501.*** We possess worldwide exclusive rights to manufacture, use and sell certain KOR antagonist compounds. The CERC-501 patent portfolio consists of a single patent family with dozens of issued patents and pending patent applications, including patents issued in the U.S., Australia, Canada, China, Europe and Japan. The patents in this family include composition of matter claims, including picture claims to CERC-501 or a pharmaceutically acceptable salt thereof, and/or use claims of varying scope. The expiration date of the two U.S. patents is January 13, 2029, not including any potential patent term extension or market exclusivity period.

- ***CERC-406 and COMTi Platform.*** We possess worldwide exclusive rights to manufacture, use and sell COMT inhibitor compounds. The COMT patent portfolio includes three patent families. Each patent family consists of patent applications filed in the United States, Australia, Brazil, Canada, China, Europe, India, Japan, South Korea, Mexico and Russia. Any patents issuing from these patent applications are predicted to expire at the earliest in 2031, not including any potential patent term extension or market exclusivity period. In 2014 and 2015, we received Notices of Allowance for two U.S. patent applications that broadly and/or specifically cover current compounds of interest within the COMTi Platform, including CERC-406. Both of the allowed U.S. applications issued as patents in 2015.

- ***FP01.*** On March 17, 2015, we provided notice to Johns Hopkins University that we were terminating the exclusive, worldwide license to develop and market FP01 in chronic, persistent cough. Such termination will be effective on June 15, 2015 and, thereafter, we will no longer have any rights to the previously-licensed intellectual property concerning FP01.

The term of any individual patent depends upon the legal term of the patents in the countries in which they are obtained. In most countries where we file, the patent term is 20 years from the earliest date of filing a non-provisional patent application.

In the United States, the patent term of a patent that covers an FDA-approved drug that contains an active ingredient or salt or ester of the active ingredient that has not previously been marketed may also be eligible for patent term extension, which permits patent term restoration to account for the patent term lost during the FDA regulatory review process. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is based upon one half of the time between the IND effective date and a company's initial submission of a marketing application, plus the entire time between the submission of the marketing application and the FDA's approval of the application. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug may be extended. Similar provisions are available in Europe and other non-United States jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our product candidates receive FDA approval, we expect to apply for patent term extensions on patents covering those product candidates. We intend to seek patent term extensions to any of our issued patents in any jurisdiction where these are available, however there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and even if granted, the length of such extensions.

For all of our product candidates, we intend to explore at each stage of the drug discovery process opportunities for follow-on patent filings to maximize patent terms and market exclusivities. Such follow-on patent filings may be directed to new indications, formulations, combination therapies, manufacturing methods, dosages, routes of administration, patient populations, contraindications, drug interactions (or absence of interactions) or other aspects of drug labels.

We also rely on trade secret protection for our confidential and proprietary information. Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. Thus, we may not be able to meaningfully protect our trade secrets. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees, the agreements provide that all inventions conceived by the individual, and which are related to our current or planned business or research and

development or made during normal working hours, on our premises or using our equipment or proprietary information, are our exclusive property.

Manufacturing and Clinical Research

We do not have any manufacturing facilities or personnel. We rely on contract manufacturing organizations, or CMOs, to produce our drug candidates in accordance with applicable provisions of the FDA's current Good Manufacturing Practice, or GMP, regulations for use in our clinical studies. The manufacture of pharmaceuticals is subject to extensive GMP regulations, which impose various procedural and documentation requirements and govern all areas of record keeping, production processes and controls, personnel and quality control.

CERC-301

We currently purchase the active ingredient of CERC-301 tablets, which is available from multiple sources, from one supplier. Xcelience currently manufactures the drug product for clinical testing. We intend to identify and qualify multiple manufacturers to provide the active pharmaceutical ingredient, drug product and fill-and-finish services prior to submission of a new drug application to the FDA. In preparation for Clin301-203, we expect to enter into multiple contract service agreements with providers of administrative, data capture, management, monitoring and statistical analysis services relating to our Clin301-203 study. We will remain substantially responsible for overseeing and managing the conduct of the Clin301-203 study in the U.S., with separate agreements with investigative sites performing the study, other clinical research organizations and other third-party vendors.

CERC-501

As part of the exclusive license agreement with Lilly, we assumed all accountability and responsibility for existing drug substance, drug product and packaged clinical trial material of CERC-501, as well as all future manufacturing of CERC-501 for development and commercialization. Currently, clinical trial material necessary for supplying the existing studies for CERC-501 are warehoused with one supplier. Almac Group is a provider of a comprehensive range of services extending from research through pharmaceutical and clinical development to commercialization of product. We intend to identify and qualify multiple manufacturers to provide the active pharmaceutical ingredient, drug product and fill-and-finish services prior to submission of a new drug application to the FDA.

In preparation for Clin501-201, we expect to enter into a master contract services agreement with Vince and Associates Clinical Research, or Vince, under which Vince will provide administrative, data capture, management, monitoring and statistical analysis services relating to our Clin501-201 study. We expect that Vince will be substantially responsible for overseeing and managing the conduct of the Clin501-201 study in the U.S., although we will remain ultimately responsible for the study and will have separate agreements with investigative sites performing the study, other clinical research organizations and other third-party vendors.

All of our drug candidates are small compounds and are manufactured in reliable and reproducible synthetic processes from readily available starting materials. The chemistry is amenable to scale up and does not require unusual equipment in the manufacturing process. We expect to continue to develop drug candidates that can be produced cost-effectively at contract manufacturing facilities.

License Agreements

Merck CERC-301 License

In March 2013, we entered into an exclusive license agreement with Merck pursuant to which Merck granted us rights relating to certain small molecule compounds which are known to inhibit or

antagonize the activity of the NR2B receptor as its primary mechanism of action and any pharmaceutical product containing such compounds, or an NR2B Product, for the prevention, diagnosis and/or treatment of all disease in humans. Merck retained a co-exclusive right to conduct non-human and non-clinical research under patents for the licensed NR2B antagonist compounds and NR2B Products. In addition to the license grant, Merck agreed that for a period of three years from the effective date of the license agreement that it would not, either by itself or through collaboration with a third party, develop, manufacture or commercialize anywhere any product comprising an NR2B antagonist compound.

In connection with the license grant of certain NR2B antagonist compounds and NR2B Products, we granted Merck a right of first negotiation to obtain an exclusive, worldwide license and/or other worldwide rights to research, develop, commercialize, sell and/or offer for sale any such NR2B Product. Pursuant to such right of first negotiation, we must provide advance notice to Merck if we intend to offer a license of any kind, or to assign or transfer or otherwise convey any other rights related to the development or commercialization of an NR2B Product. If Merck either chooses not to exercise its right of first negotiation or we fail to enter into an agreement with Merck as provided in the agreement, we will be free to enter into negotiations and contract with third parties with respect to such NR2B Product and will have no further obligation to Merck regarding such NR2B Product. In November 2013, we provided notice to Merck of our intent to potentially license or transfer CERC-301 and, after evaluating, Merck ultimately decided not to exercise its right of first negotiation with respect to CEC-301. As a result, pursuant to the terms of the license agreement, Merck no longer has, and we no longer have an obligation to provide, a right of first negotiation to Merck with respect to CERC-301.

In consideration of the license, we are required to make an initial aggregate payment of $1.5 million. We made an initial payment of $750,000 pursuant to the terms of the license within 45 days of the execution of the license agreement. The balance of the initial payment is due upon the later of (i) FDA acceptance of Merck preclinical data and (ii) FDA acceptance of data from a study that results in the FDA approving a Phase 3 clinical trial for an NR2B Product candidate. For each NR2B Product we develop, we are required to make milestone payments in an amount not to exceed, in the aggregate, $40.5 million upon the achievement of various development and regulatory milestones, including first commercial sale. Additionally, we are required to make sales milestone payments in an amount not to exceed $15.0 million. Upon commercialization of an NR2B Product, we will pay Merck a royalty in the high single digits on net sales of NR2B Product. The royalty obligation will be on a product-by-product and country-by-country basis until the later of (i) the expiration of the last to expire valid patent claim of a patent licensed to us under the license agreement covering the NR2B Product in such country, and (ii) ten years from the first commercial sale of the NR2B Product in such country.

Our license agreement with Merck will remain in effect on a product-by-product and country-by-country basis until our obligation to pay royalties under the license agreement expire with respect to such product in such country. Upon expiration of the license agreement with respect to a product in a country, our license grant for such product in such country will become a fully paid-up, royalty-free, irrevocable, perpetual non-exclusive license.

We have the unilateral right to terminate the license agreement in its entirety without cause upon 90 days prior written notice to Merck. Either party may terminate the license agreement in its entirety in the event of an uncured material breach by the other party, upon the other party's filing or institution of bankruptcy, reorganization, liquidation or receivership proceeding or upon an assignment of a substantial portion of its assets for the benefit of creditors. Merck may terminate the license agreement with respect to a particular patent licensed to us if we challenge the validity or enforceability of such patent. If Merck terminates the agreement for cause, or if we exercise our right to terminate the agreement without cause, the rights granted to us under this license will revert to Merck.

Lilly CERC-501 License

In February 2015, we entered into an exclusive license agreement with Lilly pursuant to which Lilly granted us rights relating to certain small molecule compounds which are potent and selective kappa opioid receptor, or KOR, antagonists and any pharmaceutical product containing such compounds, or a KOR Product, for the prevention, diagnosis and/or treatment of all disease in humans. In connection with the license grant of certain KOR antagonist compounds and KOR Products, we granted Lilly a right of first negotiation to obtain an exclusive, worldwide license and/or other worldwide rights to develop or commercialize any such KOR Product. Pursuant to such right of first negotiation, we must provide advance notice to Lilly if we intend to offer a license of any kind, or to assign or transfer or otherwise convey any other rights related to the development or commercialization of a KOR Product. If Lilly either chooses not to exercise its right of first negotiation or we fail to enter into an agreement with Lilly as provided in the agreement, we will be free to enter into negotiations and contract with third parties with respect to such KOR Product and will have no further obligation to Lilly regarding such KOR Product.

In consideration of the license, we are required to make an initial aggregate payment of $1.0 million. We made an initial payment of $750,000 pursuant to the terms of the license within 30 days of the execution of the license agreement. The balance of the initial payment is due 30 days after completion of the final study report for the 9-month toxicology study to be conducted by us in non-human primates. For the first KOR Product we develop, we are required to make milestone payments in an amount not to exceed, in the aggregate, $19.0 million upon the achievement of various development and regulatory milestones, including first commercial sale. Additionally, we are required to make sales milestone payments in an amount not to exceed $30.0 million. Upon commercialization of a KOR Product, we will pay Lilly a tiered royalty on net sales of KOR Product from mid-single digits to low-double digits. The royalty obligation will be on a product by product and country by country basis until the later of (i) the expiration of the last to expire valid patent claim of a patent licensed to us under the license agreement covering the KOR Product in such country, and (ii) eleven years from the first commercial sale of the KOR Product in such country.

Our license agreement with Lilly will remain in effect on a product by product and country by country basis until our obligation to pay royalties under the license agreement expire with respect to such product in such country. Upon expiration of the license agreement with respect to a product in a country, our license grant for such product in such country will become a fully paid up, royalty free, irrevocable, perpetual non exclusive license.

We have the unilateral right to terminate the license agreement in its entirety without cause upon 90 days prior written notice to Lilly. Either party may terminate the license agreement in its entirety in the event of an uncured material breach by the other party, upon the other party's filing or institution of bankruptcy, reorganization, liquidation or receivership proceeding or upon an assignment of a substantial portion of its assets for the benefit of creditors. If Lilly terminates the agreement for cause, or if we exercise our right to terminate the agreement without cause, the rights granted to us under this license will revert to Lilly.

Merck COMTi License

In March 2013, we entered into an exclusive license agreement Merck pursuant to which Merck granted to us certain rights in small molecule compounds which are known to inhibit the activity of COMT as its primary mechanism of action and any pharmaceutical product containing such compounds, or a COMTi Product, in each case for the prevention, diagnosis and/or treatment of all disease in humans. Merck retained a co-exclusive right to conduct non-human and non-clinical research under such patents for certain COMT compounds.

In addition to the agreed-upon COMT compounds that are licensed to us, we have the right to request that up to 60 additional COMT compounds be included in our license grant during the two year period after we entered into the license agreement with Merck. Merck may only reject the inclusion of such COMT compound if such COMT compounds meet certain criteria that we have agreed to with Merck in the license agreement. Otherwise, such COMT compounds will be included in our license grant.

In connection with the license grant of certain COMT compounds and COMT Products, we granted Merck a right of first negotiation to obtain an exclusive, worldwide license and/or other worldwide rights to research, develop, commercialize, sell and/or offer for sale any such COMT Product. Pursuant to such right of first negotiation, we must provide advance notice to Merck if we intend to offer a license of any kind or to assign or transfer or otherwise convey any other rights related to the development or commercialization of a COMT Product. If Merck either chooses not to exercise its right of first negotiation or we fail to enter into an agreement with Merck as provided in the agreement, we will be free to enter into negotiations and contract with respect to such COMT Product with a third party and will have no further obligation to Merck regarding such COMT Product.

In consideration of the license, we made a $200,000 upfront payment to Merck. For each COMT Product we develop, we are required to pay up to $6.15 million in milestone payments upon achievement of various development and regulatory milestones. Upon commercialization of a COMT Product, we are required to pay Merck a royalty of a low single digit on net sales of a COMT Product. The royalty obligation will be on a product-by-product and country-by-country basis until the later of (a) the expiration of the last to expire valid patent claim of a patent licensed to us under the license agreement covering the COMT Product in such country, and (b) ten years from the first commercial sale of the COMT Product in such country.

Our license agreement with Merck will remain in effect on a product-by-product and country-by-country basis until our obligation to pay royalties under the license agreement expire with respect to such product in such country. Upon expiration of the license agreement with respect to a product in a country, our license grant for such product in such country will become a fully paid-up, royalty-free, irrevocable, perpetual non-exclusive license.

We have the unilateral right to terminate the license agreement in its entirety without cause upon 90 days prior written notice to Merck. Either party may terminate the license agreement in its entirety in the event of an uncured material breach by the other party, upon the other party's filing or institution of bankruptcy, reorganization, liquidation or receivership proceeding or upon an assignment of a substantial portion of its assets for the benefit of creditors. Merck may terminate the license agreement with respect to a particular patent licensed to us if we challenge the validity or enforceability of such patent. If Merck terminates the agreement for cause, or if we exercise our right to terminate the agreement without cause, the rights granted to us under this license will revert to Merck.

Commercialization

We have not yet established a sales, marketing or product distribution infrastructure because our candidates are still in preclinical or early clinical development. We intend to selectively retain commercialization or co-commercialization rights in the United States for CERC-301, CERC-501 and certain indications of our COMTi platform, which we may complement with co-promotion agreements with partners. For those product candidates for which we receive marketing approval, we plan to build a specialty sales force and marketing team as well as to collaborate with third parties to market the approved product candidates in the United States. We may also seek to commercialize any of our approved products outside of the United States, although we only plan to do so with one or more collaborators.

Competition

We face, and will continue to face, intense competition from pharmaceutical and biotechnology companies, as well as numerous academic and research institutions and governmental agencies, both in the United States and abroad. We compete, or will compete, with existing and new products being developed by our competitors. Some of these competitors are pursuing the development of pharmaceuticals that target the same diseases and conditions that our research and development programs target. Even if we and our potential collaborators are successful in developing our product candidates, the resulting products would compete with a variety of established drugs in the areas of depression, bipolar depression, post-partum depression, schizophrenia, Parkinson's disease and impulse control disorders, or ICDs.

CERC-301:

Our lead product candidate, CERC-301, will compete with other drugs used as adjunctive therapies for the treatment of MDD, such as Abilify, marketed by Otsuka America Pharmaceutical, Inc. and Bristol-Myers Squibb; Seroquel XR, marketed by Astra Zeneca; and buproprion, a generic drug. Furthermore, to our knowledge, there are five competitive rapid onset antidepressant or anti-suicide programs in development:

- Esketamine is in Phase 3 development by Johnson & Johnson, or J&J, for administration as a nasal spray;
- AZD8108 is in Phase 1 development by AstraZeneca Pharmaceuticals LP, for oral administration;
- Rapastinel is approaching Phase 3 development by Naurex Inc., or Naurex, which has recently entered into an agreement to be acquired by Allergan plc, or Allergan for intravenous administration;
- NRX 1074 by Naurex (which has recently entered into an agreement to be acquired by Allergan) has completed a single intravenously administered dose Phase 2 study, which, along with oral and intravenous Phase 1 PK findings, will be used to select an oral dose for a repeat-dose Phase 2 study; and
- ALKS-5461, which is believed to be acting as a functional kappa antagonist, is in Phase 3 development by Alkermes plc, or Alkermes, as an oral application and has shown signals of rapid onset as an adjunctive therapy.

CERC-501:

There are no approved pharmacologic treatments for co-occurring disorders even though there are likely more than 5.0 million Americans alone who suffer from co-occurring depression and substance use disorders. Our second Phase 2 product candidate, CERC-501, is being developed with the ultimate goal of treating such co-occurring disorders. To our knowledge, there are no other single moiety selective KOR antagonists in development to date. ALKS 5461, however, is believed to be acting as a functional KOR antagonist that is now in Phase 3 development for MDD as an adjunctive antidepressant in patients with MDD who have no more than two inadequate responses to antidepressant therapy. To our knowledge, the only other competitive program that is being studied in depression and substance use disorders is LY2940094 by Lilly that is in Phase 2 development for the treatment of both MDD and alcohol dependence.

COMT Inhibitor Platform

Our potential products for the treatment of schizophrenia would compete with Zyprexa, marketed by Lilly; Risperdal, marketed by J&J; Abilify, Seroquel, and Clozaril. Zyprexa (olanzapine), Risperdal

(risperidone), Seroquel (quetiapine) and Clozaril (clozapine) are all now generic in the United States. Currently, no treatments are approved for cognitive impairment associated with schizophrenia, although Forum is developing EVP-6124 (encenicline) which is in Phase 3 development by for the treatment of cognitive impairment in schizophrenia.

Our potential products for the treatment of the cognitive impairment of Parkinson's disease may compete with existing COMT inhibitors Comtan (entacapone), marketed by Novartis Pharmaceuticals Corp., or Novartis, (licensed from Orion), Tasmar (tolcapone), marketed by Valeant, and Stalevo (fixed combinations of entacapone and levodopa/carbidopa), also marketed by Novartis (licensed from Orion). Comtan, Tasmar, and Stalevo are all generic in the United States. Currently, no treatments are approved for cognitive impairment in Parkinson's disease.

Our potential products for the treatment of ICDs would compete with the off-label use of SSRIs. In addition, the pure opioid antagonist, Revia (naltrexone) is approved for treating alcohol dependence and the blockage of the effects of exogenously administered opioids and is marketed by Teva Women's. The FDA has not approved specific medications in the treatment of ICDs; however, some medications have proven effective, including SSRI antidepressants.

CERC-406:

There are no approved pharmacologic treatments for cognitive impairment associated with MDD in the U.S. at this time. In March 2015, vortioxetine (Brintellix®), marketed in the United States by Lundbeck Pharmaceuticals, which was originally developed and commercialized for the treatment of MDD, received a positive opinion from the Committee for Medicinal Products for Human Use of the European Medicines Agency to expand the label to include information for cognitive function in patients with depression. A supplemental application for the addition of clinical data to the FDA approved product label for Brintellix was recently accepted by the FDA for review.

In addition, the companies described above and other competitors may have a variety of drugs in development or may be awaiting FDA approval that could reach the market and become established before we have a product to sell. Our competitors may also develop alternative therapies that could further limit the market for any drugs that we may develop. Many of our competitors are using technologies or methods different or similar to ours to identify and validate drug targets and to discover novel small compound drugs. Many of our competitors and their collaborators have significantly greater experience than we do in the following:

- identifying and validating targets;
- screening compounds against targets;
- preclinical and clinical trials of potential pharmaceutical products; and
- obtaining FDA and other regulatory clearances.

In addition, many of our competitors and their collaborators have substantially greater advantages in the following areas:

- capital resources;
- research and development resources;
- manufacturing capabilities; and
- sales and marketing.

Smaller companies may also prove to be significant competitors, particularly through proprietary research discoveries and collaborative arrangements with large pharmaceutical and established biotechnology companies. Many of our competitors have products that have been approved or are in advanced development. We face competition from other companies, academic institutions, governmental agencies and other public and private research organizations for collaborative arrangements with pharmaceutical and biotechnology companies, in recruiting and retaining highly qualified scientific and management personnel and for licenses to additional technologies. Our competitors, either alone or with their collaborators, may succeed in developing technologies or drugs that are more effective, safer, and more affordable or more easily administered than ours and may achieve patent protection or commercialize drugs sooner than us. Developments by others may render our product candidates or our technologies obsolete. Our failure to compete effectively could have a material adverse effect on our business.

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and in other countries extensively regulate, among other things, the research, development, testing, manufacture, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, import and export, pricing, and government contracting related to pharmaceutical products such as those we are developing. The processes for obtaining marketing approvals in the United States and in foreign countries, along with subsequent compliance with applicable statutes and regulations, require the expenditure of substantial time and financial resources.

United States Government Regulation

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and its implementing regulations. The process of obtaining marketing approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable United States requirements at any time during the product development process, approval process or after approval, may subject an applicant to a variety of administrative or judicial sanctions, or other actions, such as the FDA's delay in review of or refusal to approve a pending NDA, withdrawal of an approval, imposition of a clinical hold or study termination, issuance of Warning Letters or Untitled Letters, mandated modifications to promotional materials or issuance of corrective information, requests for product recalls, consent decrees, corporate integrity agreements, deferred prosecution agreements, product seizures or detentions, refusal to allow product import or export, total or partial suspension of or restriction of or imposition of other requirements relating to production or distribution, injunctions, fines, debarment from government contracts and refusal of future orders under existing contracts, exclusion from participation in federal and state healthcare programs, FDA debarment, restitution, disgorgement or civil or criminal penalties, including fines and imprisonment.

The process required by the FDA before a new drug may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests, animal studies and formulation studies in compliance with the FDA's good laboratory practice, or GLP, regulations;
- submission to the FDA of an IND which must become effective before human clinical trials may begin;
- approval by local or central independent institutional review boards, or IRB, before each clinical trial may be initiated;

- performance of human clinical trials, including adequate and well-controlled clinical trials, in accordance with good clinical practices, or GCP, and regulations to establish the safety and efficacy of the proposed drug product for each indication;
- submission to the FDA of an NDA;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with current good manufacturing practice, or GMP, regulations and to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity, as well as satisfactory completion of an FDA inspection of selected clinical sites to determine GCP compliance; and
- FDA review and approval of the NDA.

Additionally, if a drug is considered a controlled substance, prior to the commencement of marketing, the DEA must also determine the controlled substance schedule, taking into account the recommendation of the FDA.

Preclinical Studies and IND Submission

Preclinical studies include laboratory evaluation of product chemistry, pharmacology, toxicity and formulation, as well as animal studies to assess potential safety and efficacy. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data and any available clinical data or literature, among other things, to the FDA as part of an IND. Some preclinical testing may continue even after the IND is submitted. Once the IND is submitted, the sponsor must wait 30 calendar days before initiating any clinical trials. During this time, among other things, the FDA has an opportunity to review the IND for safety to assure that research subjects will not be subjected to unreasonable risk. The FDA may raise concerns or questions related to one or more proposed clinical trials and place the clinical trial on a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical Trials

Clinical trials involve the administration of the investigational new drug to human subjects under the supervision of qualified investigators in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent in writing for their participation in any clinical trial, and review and approval by an IRB. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, the trial procedures, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated, and a statistical analysis plan. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. In addition, a central IRB or local IRB at each institution participating in the clinical trial must review and approve the plan for any clinical trial before it commences at that institution, and the IRB must continue to oversee the clinical trial, including any changes, while it is being conducted. Information about certain clinical trials, including a description of the study and study results, must be submitted within specific timeframes to the National Institutes of Health, or NIH, for public dissemination on their ClinicalTrials.gov website.

Human clinical trials are typically conducted in three sequential phases, which may overlap or be combined. In Phase 1, the drug is initially introduced into healthy human subjects or subjects with the target disease or condition and tested for safety, dosage tolerance, absorption, metabolism, distribution, excretion and, if possible, to gain an early indication of its effectiveness. In Phase 2, the drug typically is administered through well-controlled studies to a limited subject population with the target disease or

condition to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage. In Phase 3, the drug is administered to an expanded subject population, generally at geographically dispersed clinical trial sites, in two adequate and well-controlled clinical trials to generate enough data to statistically evaluate the efficacy and safety of the product for approval, to establish the overall risk-benefit profile of the product and to provide adequate information for the labeling of the product.

The manufacture of investigational drugs for the conduct of human clinical trials is subject to GMP requirements. Investigational drugs and active pharmaceutical ingredients imported into the United States are also subject to regulation by the FDA relating to their labeling and distribution. Further, the export of investigational drug products outside of the United States is subject to regulatory requirements of the receiving country as well as United States export requirements under the FDCA.

Progress reports and other summary information detailing the results of the clinical trials must be submitted at least annually to the FDA and more frequently if certain serious adverse events occur or other significant safety information is found. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, or at all. Furthermore, the FDA or the sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects are being exposed to an unacceptable health risk or the trial is not being conducted in accordance with the applicable regulatory requirements or the protocol. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to subjects. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group regularly reviews accumulated data and advises the study sponsor regarding the continuing safety of trial subjects, potential trial subjects, and the continuing validity and scientific merit of the clinical trial. We may also suspend or terminate a clinical trial based on evolving business objectives and/or competitive climate.

Marketing Approval

Assuming successful completion of the required clinical testing, the results of the preclinical and clinical studies, together with detailed information relating to the product's chemistry, manufacture, controls and proposed labeling, among other things, are submitted to the FDA as part of an NDA requesting approval to market the product for one or more indications. In most cases, the submission of an NDA is subject to a substantial application user fee. These user fees must be filed at the time of the first submission of the application, even if the application is being submitted on a rolling basis. A waiver from the application user fee may be sought by an applicant. One basis for a waiver of the application user fee is if the applicant employs fewer than 500 employees, including employees of affiliates, the applicant does not have a drug product that has been approved under a human drug application and introduced or delivered for introduction into interstate commerce, and the applicant, including its affiliates, is submitting its first human drug application. Under the Prescription Drug User Fee Act, or PDUFA, guidelines that are currently in effect, the FDA has agreed to certain performance goals regarding the timing of its review of an application. The FDA aims to review 90% of all standard review applications within ten months of acceptance for filing and six months of acceptance for filing for priority review applications.

In addition, under the Pediatric Research Equity Act, or PREA, an NDA or supplement to an NDA for a new active ingredient, indication, dosage form, dosage regimen or route of administration must contain data that are adequate to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations, and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may, on its own initiative or at the request of the applicant, grant deferrals for submission of some or all pediatric data until

after approval of the product for use in adults, or full or partial waivers from the pediatric data requirements.

The FDA also may require submission of a risk evaluation and mitigation strategy, or REMS, either during the application process or after the approval of the drug to ensure the benefits of the drug outweigh the risks. The REMS plan could include medication guides, physician communication plans, assessment plans, and elements to assure safe use, such as restricted distribution methods, patient registries or other risk minimization tools.

The FDA conducts a preliminary review of all NDAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the application must be resubmitted with the additional information. The resubmitted application is also subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review. The FDA reviews an NDA to determine, among other things, whether the drug is safe and effective and whether the facility in which it is manufactured, processed, packaged or held meets standards designed to assure the product's continued safety, quality and purity.

Under the FDCA, before approving a drug for which no active ingredient (including any ester or salt of active ingredients) has previously been approved by the FDA, the FDA must either refer that drug to an external advisory committee or provide in an action letter, a summary of the reasons why the FDA did not refer the drug to an advisory committee. The external advisory committee review may also be required for other drugs because of certain other issues, including clinical trial design, safety and effectiveness, and public health questions. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with GMP requirements and adequate to assure consistent production of the product within required specifications by the manufacturer and all of its subcontractors and contract manufacturers. Additionally, before approving an NDA, the FDA will inspect one or more clinical trial sites to assure compliance with GCP regulations.

The testing and approval process for an NDA requires substantial time, effort and financial resources, and each may take several years to complete. Data obtained from preclinical and clinical testing are not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent marketing approval. The FDA may not grant approval of an NDA on a timely basis, or at all.

After evaluating the NDA and all related information, including the advisory committee recommendation, if any, and inspection reports regarding the manufacturing facilities and clinical trial sites, the FDA may issue an approval letter, or, in some cases, a complete response letter. A complete response letter generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA and may require additional clinical or preclinical testing, or other information, in order for FDA to reconsider the application. The FDA has a review goal of completing its review of 90% of resubmissions within two or six months after receipt, depending on the type of information included. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA may issue an approval letter. An approval

letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

Even if the FDA approves a product, it may limit the approved indications for use of the product, require that contraindications, warnings or precautions be included in the product labeling, including a black boxed warning, require that post-approval studies, including Phase 4 clinical trials, be conducted to further assess a drug's safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution restrictions or other risk management mechanisms under a REMS which can materially affect the potential market and profitability of the product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs. After approval, certain circumstances may require FDA notification, review, or approval, as well as further testing. These may include some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, or new safety information

Special FDA Expedited Review and Approval Programs

The FDA has various programs, including fast track designation, accelerated approval, priority review and breakthrough designation, that are intended to expedite or simplify the process for the development and FDA review of drugs that are intended for the treatment of serious or life threatening diseases or conditions, and demonstrate the potential to address unmet medical needs or present a significant improvement over existing therapy. The purpose of these programs is to provide important new drugs to patients earlier than under standard FDA review procedures.

To be eligible for a fast track designation, the FDA must determine, based on the request of a sponsor, that a product is intended to treat a serious or life threatening disease or condition and demonstrates the potential to address an unmet medical need. The FDA will determine that a product will fill an unmet medical need if the product will provide a therapy where none exists or provide a therapy that may be potentially superior to existing therapy based on efficacy, safety, or public health factors. If fast track designation is obtained, drug sponsors may be eligible for more frequent development meetings and correspondence with the FDA. In addition, the FDA may initiate review of sections of an NDA before the application is complete. This "rolling review" is available if the applicant provides and the FDA approves a schedule for the remaining information. In some cases, a fast track product may be eligible for accelerated approval or priority review.

The FDA may give a priority review designation to drugs that are intended to treat serious conditions and provide significant improvements in the safety or effectiveness of the treatment, diagnosis, or prevention of serious conditions. A priority review means that the goal for the FDA is to review an application in six months, rather than the standard review of ten months under current PDUFA guidelines. These six and ten month review periods are measured from the "filing" date rather than the receipt date for NDAs, which typically adds approximately two months to the timeline for review and decision from the date of submission. Products that are eligible for fast track designation may also be considered appropriate to receive a priority review.

In addition, products studied for their safety and effectiveness in treating serious or life-threatening illnesses or conditions and that fill an unmet medical need may be eligible for accelerated approval and may be approved on the basis of adequate and well-controlled clinical trials establishing that the drug product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require a sponsor of a drug receiving accelerated approval to perform post-marketing studies to verify and

describe the predicted effect on irreversible morbidity or mortality or other clinical endpoints, and the drug may be subject to accelerated withdrawal procedures.

Moreover, under the provisions of the new Food and Drug Administration Safety and Innovation Act, or FDASIA, enacted in 2012, a sponsor can request designation of a product candidate as a "breakthrough therapy." A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Drugs designated as breakthrough therapies are eligible for the fast track designation features as described above, intensive guidance on an efficient drug development program beginning as early as Phase 1 trials, and a commitment from the FDA to involve senior managers and experienced review staff in a proactive collaborative, cross-disciplinary review.

Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Post-Approval Requirements

Drugs manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, manufacturing, periodic reporting, product sampling and distribution, advertising and promotion, and reporting of adverse experiences with the product and drug shortages. After approval, most changes to the approved product, such as adding new indications or other labeling claims are subject to prior FDA review and approval. There also are continuing, annual user fee requirements for any marketed products and the establishments at which such products are manufactured, as well as new application fees for supplemental applications with clinical data.

The FDA may impose a number of post-approval requirements as a condition of approval of an NDA. For example, the FDA may require post-marketing testing, including Phase 4 clinical trials and surveillance to further assess and monitor the product's safety and effectiveness after commercialization.

In addition, drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and state agencies and list drugs manufactured at their facilities with the FDA. These facilities are further subject to periodic announced and unannounced inspections by the FDA and these state agencies for compliance with GMP and other regulatory requirements. Changes to the manufacturing process are strictly regulated and may require prior approval by the FDA or notification to the FDA before or after being implemented. FDA regulations also require investigation and correction of any deviations from GMP and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain GMP compliance.

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product becomes available in the market.

Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in mandatory revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition

of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, Warning Letters or Untitled Letters, holds or termination of post-approval clinical trials or FDA debarment;
- delay or refusal of the FDA to approve pending NDAs or supplements to approved NDAs, or suspension or revocation of product license approvals;
- regulatory authority, including the FDA, issued safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings about such products;
- mandated modifications to promotional material or issuance of corrective information;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties, including imprisonment, disgorgement and restitution, as well as consent decrees, corporate integrity agreements, deferred prosecution agreements and exclusion from federal healthcare programs.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Although physicians, in the practice of medicine, may prescribe approved drugs for unapproved indications, pharmaceutical companies are prohibited from marketing or promoting their drug products for uses outside of the approved indications in the approved prescribing information. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly marketed or promoted off-label uses may be subject to significant liability, including criminal and civil penalties under the FDCA and False Claims Act, exclusion from participation in federal healthcare programs debarment from government contracts and refusal of future orders under existing contracts, and mandatory compliance programs under corporate integrity agreements or deferred prosecution agreements.

In addition, the distribution of prescription pharmaceutical products, including samples, is subject to the Prescription Drug Marketing Act, or PDMA, which, among other things, regulates the distribution of drugs and drug samples at the federal level, and sets minimum standards for the registration and regulation of drug distributors by the states. Both the PDMA and state laws limit the distribution of prescription pharmaceutical product samples and impose requirements to ensure accountability in distribution.

Moreover, the recently enacted Drug Quality and Security Act, imposes new obligations on manufacturers of pharmaceutical products related to product tracking and tracing. Among the requirements of this new legislation, manufacturers will be required to provide certain information regarding drug products to individuals and entities to which product ownership is transferred, label drug products with a product identifier, and keep certain records regarding drug products. The transfer of information to subsequent product owners by manufacturers will eventually be required to be done electronically. Manufacturers will also be required to verify that purchasers of the manufacturers' products are appropriately licensed. Further, under this new legislation, manufactures will have drug product investigation, quarantine, disposition, and FDA and trading partner notification responsibilities related to counterfeit, diverted, stolen, and intentionally adulterated products such that they would result in serious adverse health consequences or death, as well as products that are the subject of fraudulent transactions or which are otherwise unfit for distribution such that they would be reasonably likely to result in serious health consequences or death.

DEA Regulation

While we currently do not know whether any of our product candidates will be considered to be controlled substances, we will be required to evaluate the abuse potential of our product candidates. If any of our product candidates are considered controlled substances, we will need to comply with additional regulatory requirements.

Certain drug products may be regulated as "controlled substances" as defined in the Controlled Substances Act of 1970, or CSA, and the United States Drug Enforcement Administration's, or DEA's, implementing regulations. The DEA regulates controlled substances as Schedule I, II, III, IV or V substances. Schedule I substances by definition have no established medicinal use, and may not be marketed or sold in the United States. A pharmaceutical product may be listed as Schedule II, III, IV or V, with Schedule II substances considered to present the highest risk of abuse and Schedule V substances the lowest relative risk of abuse among such substances. FDA provides a recommendation to DEA as to whether a drug should be classified as a controlled substance and the appropriate level of control. If DEA scheduling is required, a drug product may not be marketed until the scheduling process is completed, which could delay the launch of the product.

Depending on the Schedule, drug products may be subject to registration, security, recordkeeping, reporting, storage, distribution, importation, exportation, inventory, quota and other requirements administered by the DEA, which are directly applicable to product applicants, contract manufacturers and to distributors, prescribers and dispensers of controlled substances. The DEA regulates the handling of controlled substances through a closed chain of distribution. This control extends to the equipment and raw materials used in their manufacture and packaging in order to prevent loss and diversion into illicit channels of commerce.

Annual registration is required for any facility that manufactures, distributes, dispenses, imports or exports any controlled substance. The registration is specific to the particular location, activity and controlled substance schedule. For example, separate registrations are needed for import and manufacturing, and each registration will specify which schedules of controlled substances are authorized. Similarly, separate registrations are also required for separate facilities.

The DEA typically inspects a facility to review its security measures prior to issuing a registration and on a periodic basis. Security requirements vary by controlled substance schedule, with the most stringent requirements applying to Schedule I and Schedule II substances. Records must be maintained for the handling of all controlled substances, and periodic reports may be required to made to the DEA for the distribution of certain controlled substances. Reports must also be made for thefts or significant losses of any controlled substance. To enforce these requirements, the DEA conducts periodic inspections of registered establishments that handle controlled substances. Failure to maintain compliance with applicable requirements, particularly as manifested in loss or diversion, can result in administrative, civil or criminal enforcement. The DEA may seek civil penalties, refuse to renew necessary registrations, or initiate administrative proceedings to revoke those registrations. In some circumstances, violations could result in criminal proceedings or consent decrees. Individual states also independently regulate controlled substances.

Federal and State Healthcare related, Fraud and Abuse and Data Privacy and Security Laws and Regulations

In addition to FDA restrictions on marketing of pharmaceutical products, federal and state fraud and abuse, and other laws regulations, and requirements restrict business practices in the biopharmaceutical industry. These laws include anti-kickback and false claims laws and regulations, state and federal transparency laws regarding payments or other items of value provided to health care professionals, as well as data privacy and security laws and regulations and other requirements

applicable to the healthcare industry, including pharmaceutical manufacturers. There are also laws, regulations, and requirements applicable to the award and performance of federal contracts and grants.

The federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or in return for purchasing, leasing, ordering, or arranging for or recommending the purchase, lease, or order of any item or service reimbursable, in whole or in part, under Medicare, Medicaid or other federal healthcare programs. The term "remuneration" has been broadly interpreted to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, formulary managers, and beneficiaries on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are narrowly drawn. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases, or recommendations may be subject to scrutiny if they do not meet the requirements of a statutory or regulatory exception or safe harbor. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the statute has been violated.

The reach of the Anti Kickback Statute was also broadened by the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively Affordable Care Act, which, among other things, amended the intent requirement of the federal Anti Kickback Statute and certain provisions of the criminal health care fraud statute (discussed below) such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the Affordable Care Act provides that the government may assert that a claim for payment for items or services resulting from a violation of the federal Anti Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act. Penalties for violation of the Anti Kickback Statute include criminal fines, imprisonment, civil penalties and damages, exclusion from participation in federal healthcare programs and corporate integrity agreements or deferred prosecution agreements. Conviction or civil judgments are also grounds for debarment from government contracts.

The federal civil False Claims Act prohibits any person from knowingly presenting, or causing to be presented, a false claim for payment to 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, including payments under a federal grant. A claim includes "any request or demand" for money or property presented to the United States government. The False Claims Act also applies to false submissions that cause the government to be paid less than the amount to which it is entitled, such as a rebate. Intent to deceive is not required to establish liability under the civil False Claims Act. Several pharmaceutical and other healthcare companies have been sued under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Companies have also been sued for causing false claims to be submitted because of the companies' marketing of products for unapproved, or off-label, uses. In addition, federal health care programs require drug manufacturers to report drug pricing information, which is used to quantify discounts and establish reimbursement rates. Several pharmaceutical and other healthcare companies have been sued for reporting allegedly false pricing information, which caused the manufacturer to understate rebates owed or, when used to determine reimbursement rates, caused overpayment to providers. Violations of the civil False Claims Act may result in civil penalties and damages as well as exclusion from federal healthcare programs and corporate integrity agreements or deferred prosecution agreements. The government may further prosecute conduct constituting a false claim under the criminal False Claims Act. The criminal False Claims Act prohibits the making or presenting of a claim to the government knowing such claim to be false, fictitious, or fraudulent and, unlike the civil False Claims Act, requires proof of intent to submit a false claim. Violations of the

criminal False Claims Act can result in criminal fines and/or imprisonment, as well as exclusion from participation in federal healthcare programs. Conviction or civil judgments and other conduct are also grounds for debarment from government contracts and grants.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, also created federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payers, knowingly and willfully embezzling or stealing from a health care benefit program, willfully obstructing a criminal investigation of a health care offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. As discussed above, the Affordable Care Act amended the intent standard for certain of HIPAA's healthcare fraud provisions such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. Violations of HIPAA's fraud and abuse provisions may result in fines or imprisonment, as well as exclusion from participation in federal healthcare programs, depending on the conduct in question. Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

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.

The Veterans Health Care Act requires manufacturers of covered drugs to offer them for sale on the Federal Supply Schedule, which requires compliance with applicable federal procurement laws and regulations and subjects us to contractual remedies as well as administrative, civil and criminal sanctions.

In addition, there has been a recent trend of increased federal and state regulation of payments made to physicians and other health care providers. The Affordable Care Act created new federal requirements for reporting, by applicable manufacturers of covered drugs, payments and other transfers of value to physicians and teaching hospitals, and ownership and investment interests held by physicians and other healthcare providers and their immediate family members. Certain states also require implementation of commercial compliance programs and compliance with the pharmaceutical industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government, or otherwise restrict payments or the provision of other items of value that may be made to healthcare providers and other potential referral sources; impose restrictions on marketing practices; and/or require drug manufacturers to track and report information related to payments, gifts and other items of value to physicians and other healthcare providers.

We may also be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and its implementing regulations, imposes specified requirements relating to the privacy, security and transmission of individually identifiable health information. Penalties for violating HIPAA include civil penalties, criminal penalties and imprisonment. Among other things, HITECH, through its implementing regulations, makes HIPAA's privacy and security standards directly applicable to "business associates," defined as a person or organization, other than a member of a covered entity's workforce, that creates, receives, maintains or transmits protected health information on behalf of a covered entity for a function or activity regulated by HIPAA. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general

new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, other federal and state laws govern the privacy and security of health and other information in certain circumstances, many of which differ from each other in significant ways and may not have the same requirements, thus complicating compliance efforts.

To the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Coverage and Reimbursement

The commercial success of our product candidates and our ability to commercialize any approved product candidates successfully will depend in part on the extent to which governmental authorities, private health insurers and other third-party payers provide coverage for and establish adequate reimbursement levels for our therapeutic product candidates. In the United States, the European Union and other potentially significant markets for our product candidates, government authorities and third-party payers are increasingly imposing additional requirements and restrictions on coverage, attempting to limit reimbursement levels or regulate the price of drugs and other medical products and services, particularly for new and innovative products and therapies, which often has resulted in average selling prices lower than they would otherwise be. For example, in the United States, federal and state governments reimburse covered prescription drugs at varying rates generally below average wholesale price. Federal programs also impose price controls through mandatory ceiling prices on purchases by federal agencies and federally funded hospitals and clinics and mandatory rebates on retail pharmacy prescriptions paid by Medicaid and Tricare. These restrictions and limitations influence the purchase of healthcare services and products. Legislative proposals to reform healthcare or reduce costs under government programs may result in lower reimbursement for our product candidates or exclusion of our product candidates from coverage. Moreover, the Medicare and Medicaid programs increasingly are used as models for how private payers and other governmental payers develop their coverage and reimbursement policies.

In addition, the increased emphasis on managed healthcare in the United States and on country and regional pricing and reimbursement controls in the European Union will put additional pressure on product pricing, reimbursement and utilization, which may adversely affect our future product sales and results of operations. These pressures can arise from rules and practices of managed care groups, competition within therapeutic classes, availability of generic equivalents, judicial decisions and governmental laws and regulations related to Medicare, Medicaid and healthcare reform, coverage and reimbursement policies and pricing in general. The cost containment measures that healthcare payers and providers are instituting and any healthcare reform implemented in the future could significantly reduce our revenues from the sale of any approved product candidates. We cannot provide any assurances that we will be able to obtain and maintain third-party coverage or adequate reimbursement for our product candidates in whole or in part.

Impact of Healthcare Reform on Coverage, Reimbursement, and Pricing

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, imposed new requirements for the distribution and pricing of prescription drugs for Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription, pharmacy drugs pursuant to federal regulations. Part D plans include both standalone prescription drug benefit plans and prescription drug coverage as a supplement to Medicare Advantage plans. Unlike Medicare Part A and B, Part D coverage is not standardized. In general, Part D prescription drug plan sponsors have flexibility

regarding coverage of Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class, with certain exceptions. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for any products for which we receive marketing approval. However, any negotiated prices for our future products covered by a Part D prescription drug plan will likely be discounted, thereby lowering the net price realized on our sales to pharmacies. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payers often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from Medicare Part D may result in a similar reduction in payments from non-governmental payers.

The American Recovery and Reinvestment Act of 2009 provides funding for the federal government to compare the effectiveness of different treatments for the same illness. A plan for the research will be developed by the Department of Health and Human Services, the Agency for Healthcare Research and Quality and the National Institutes for Health, and periodic reports on the status of the research and related expenditures will be made to Congress. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private payers, it is not clear what effect, if any, the research will have on the sales of any product, if any such product or the condition that it is intended to treat is the subject of a study. It is also possible that comparative effectiveness research demonstrating benefits in a competitor's product could adversely affect the sales of our product candidates. If third-party payers do not consider our product candidates to be cost-effective compared to other available therapies, they may not cover our product candidates, once approved, as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

The United States and some foreign jurisdictions are considering enacting or have enacted a number of additional legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our products profitably. Among policy makers and payers in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives, including, most recently, the Affordable Care Act, which became law in March 2010 and substantially changes the way healthcare is financed by both governmental and private insurers. Among other cost containment measures, the Affordable Care Act establishes an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents; a new Medicare Part D coverage gap discount program; expansion of Medicaid benefits and a new formula that increases the rebates a manufacturer must pay under the Medicaid Drug Rebate Program; and expansion of the 340B drug discount program that mandates discounts to certain hospitals, community centers and other qualifying providers. In the future, there may continue to be additional proposals relating to the reform of the United States healthcare system, some of which could further limit the prices we are able to charge or the amounts of reimbursement available for our product candidates once they are approved.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act or FCPA, prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting

provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations. Activities that violate the FCPA, even if they occur wholly outside the United States, can result in criminal and civil fines, imprisonment, disgorgement, oversight, and debarment from government contracts.

Exclusivity and Approval of Competing Products

Hatch-Waxman Patent Exclusivity

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent with claims that cover the applicant's product or a method of using the product. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential competitors in support of approval of an abbreviated new drug application, or ANDA, or 505(b)(2) NDA. Generally, an ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths, dosage form and route of administration as the listed drug and has been shown to be bioequivalent through *in vitro* or *in vivo* testing or otherwise to the listed drug. ANDA applicants are not required to conduct or submit results of preclinical or clinical tests to prove the safety or effectiveness of their drug product, other than the requirement for bioequivalence testing. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug, and can often be substituted by pharmacists under prescriptions written for the reference listed drug. 505(b)(2) NDAs generally are submitted for changes to a previously approved drug product, such as a new dosage form or indication.

The ANDA or 505(b)(2) NDA applicant is required to provide a certification to the FDA in the product application concerning any patents listed for the approved product in the FDA's Orange Book, except for patents covering methods of use for which the applicant is not seeking approval. Specifically, the applicant must certify with respect to each patent that:

- the required patent information has not been filed;
- the listed patent has expired;
- the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or
- the listed patent is invalid, unenforceable, or will not be infringed by the new product.

Generally, the ANDA or 505(b)(2) NDA cannot be approved until all listed patents have expired, except when the ANDA or 505(b)(2) NDA applicant challenges a listed patent or if the listed patent is a patented method of use for which approval is not being sought. A certification that the proposed product will not infringe the already approved product's listed patents or that such patents are invalid or unenforceable is called a Paragraph IV certification. If the applicant does not challenge the listed patents or does not indicate that it is not seeking approval of a patented method of use, the ANDA or 505(b)(2) NDA application will not be approved until all the listed patents claiming the referenced product have expired.

If the ANDA or 505(b)(2) NDA applicant has provided a Paragraph IV certification to the FDA, the applicant must also send notice of the Paragraph IV certification to the NDA and patent holders once the application has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph IV certification. The filing of a patent infringement lawsuit within 45 days after the receipt of notice of the Paragraph IV certification automatically prevents the FDA from approving the ANDA or 505(b)(2) NDA until the

earlier of 30 months, expiration of the patent, settlement of the lawsuit, a decision in the infringement case that is favorable to the ANDA applicant or other period determined by a court.

Hatch-Waxman Non-Patent Exclusivity

Market and data exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications for competing products. The FDCA provides a five-year period of non-patent data exclusivity within the United States to the first applicant to gain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the therapeutic activity of the drug substance. During the exclusivity period, the FDA may not accept for review an ANDA or a 505(b)(2) NDA submitted by another company that contains the previously approved active moiety. However, an ANDA or 505(b)(2) NDA may be submitted after four years if it contains a certification of patent invalidity or non-infringement.

The FDCA also provides three years of marketing exclusivity for an NDA, 505(b)(2) NDA, or supplement to an existing NDA or 505(b)(2) NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant, are deemed by the FDA to be essential to the approval of the application or supplement. Three-year exclusivity may be awarded for changes to a previously approved drug product, such as new indications, dosages, strengths or dosage forms of an existing drug. This three-year exclusivity covers only the conditions of use associated with the new clinical investigations and, as a general matter, does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for generic versions of the original, unmodified drug product. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA; however, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Pediatric Exclusivity. Pediatric exclusivity is another type of non-patent marketing exclusivity in the United States and, if granted, provides for the attachment of an additional six months of marketing protection to the term of any existing regulatory exclusivity, including the non-patent exclusivity period described above. This six-month exclusivity may be granted if an NDA sponsor submits pediatric data that fairly respond to a written request from the FDA for such data. The data do not need to show the product to be effective in the pediatric population studied; rather, if the clinical trial is deemed to fairly respond to the FDA's request, the additional protection is granted. If reports of requested pediatric studies are submitted to and accepted by FDA within the statutory time limits, whatever statutory or regulatory periods of exclusivity or Orange Book listed patent protection cover the drug are extended by six months. This is not a patent term extension, but it effectively extends the regulatory period during which the FDA cannot approve an ANDA or 505(b)(2) application owing to regulatory exclusivity or listed patents.

Orphan Drug Designation and Exclusivity. The Orphan Drug Act provides incentives for the development of drugs intended to treat rare diseases or conditions, which generally are diseases or conditions affecting less than 200,000 individuals annually in the United States, or affecting more than 200,000 in the United States and for which there is no reasonable expectation that the cost of developing and making the drug available in the United States will be recovered from United States sales. Additionally, sponsors must present a plausible hypothesis for clinical superiority to obtain orphan designation if there is a drug already approved by the FDA that is intended for the same indication and that is considered by the FDA to be the same drug as the already approved drug. This hypothesis must be demonstrated to obtain orphan drug exclusivity. Orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical study costs, tax advantages, and user-fee waivers. In addition, if a product receives FDA approval for the indication for which it has orphan designation, the product is generally entitled to orphan drug exclusivity, which

means the FDA may not approve any other application to market the same drug for the same indication for a period of seven years, except in limited circumstances, such as a showing of clinical superiority over the product with orphan exclusivity. While we have not sought to obtain orphan drug designation for any of our products, we may in the future seek such designation if we determine that the relevant criteria are met.

Foreign Regulation

In order to market any product outside of the United States, we would need to comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy and governing, among other things, clinical trials, marketing authorization, commercial sales and distribution of our products. For example, in the European Union, we must obtain authorization of a clinical trial application, or CTA, in each member state in which we intend to conduct a clinical trial. Whether or not we obtain FDA approval for a product, we would need to obtain the necessary approvals by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country and can involve additional product testing and additional administrative review periods. The time required to obtain approval in other countries might differ from and be longer than that required to obtain FDA approval. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others.

European Union Drug Approval Process

To obtain a marketing authorization of a drug in the European Union, we may submit marketing authorization applications, or MAAs, either under the so-called centralized or national authorization procedures.

Centralized procedure

The centralized procedure provides for the grant of a single marketing authorization following a favorable opinion by the European Medicines Agency or EMA that is valid in all European Union member states, as well as Iceland, Liechtenstein and Norway. The centralized procedure is compulsory for medicines produced by specified biotechnological processes, products designated as orphan medicinal products, and products with a new active substance indicated for the treatment of specified diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative disorders or autoimmune diseases and other immune dysfunctions. The centralized procedure is optional for products that represent a significant therapeutic, scientific or technical innovation, or whose authorization would be in the interest of public health. Under the centralized procedure the maximum timeframe for the evaluation of an MAA by the EMA is 210 days, excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the Committee of Medicinal Products for Human Use, or the CHMP. Accelerated assessment might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest, particularly from the point of view of therapeutic innovation. The timeframe for the evaluation of an MAA under the accelerated assessment procedure is of 150 days, excluding stop-clocks.

National authorization procedures

There are also two other possible routes to authorize medicinal products in several European Union countries, which are available for investigational medicinal products that fall outside the scope of the centralized procedure:

- **Decentralized procedure.** Using the decentralized procedure, an applicant may apply for simultaneous authorization in more than one European Union country of medicinal products that have not yet been authorized in any European Union country and that do not fall within the mandatory scope of the centralized procedure.

- **Mutual recognition procedure.** In the mutual recognition procedure, a medicine is first authorized in one European Union Member State, in accordance with the national procedures of that country. Following this, further marketing authorizations can be sought from other European Union countries in a procedure whereby the countries concerned agree to recognize the validity of the original, national marketing authorization.

In the European Union, new products authorized for marketing (i.e., reference products) qualify for eight years of data exclusivity and an additional two years of market exclusivity upon marketing authorization. The data exclusivity period prevents generic applicants from relying on the preclinical and clinical trial data contained in the dossier of the reference product when applying for a generic marketing authorization in the EU during a period of eight years from the data on which the reference product was first authorized in the EU. The market exclusivity period prevents a successful generic applicant from commercializing its product in the EU until ten years have elapsed from the initial authorization of the reference product in the EU. The ten-year market exclusivity period can be extended to a maximum of eleven years if, during the first eight years of those ten years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies.

Legal Proceedings

We are not currently a party to any material legal proceedings.

Facilities

Our headquarters are located in Baltimore, Maryland, where we occupy approximately 6,000 square feet of administrative office space. The term of the lease expires January 31, 2019. We have the ability and may expand this office space based on company's growth and employee head-count.

Employees

As of August 31, 2015, we had 11 full-time employees, six of whom were primarily engaged in research and development activities and three of whom had an M.D. and/or Ph.D. degree. None of our employees is represented by a labor union or covered by a collective bargaining agreement. We consider our relationship with our employees to be good.

MANAGEMENT

The following table sets forth the name, age and position of each of our officers and directors.

Name	Age	Position
Blake M. Paterson, M.D.	58	Chief Executive Officer, President and Director
Bernadine Heather Fraser, Ph.D.	47	Vice President, Clinical Operations and Project Management
John J. Kaiser	59	Chief Business Officer
Ronald Marcus, M.D.	57	Chief Medical Officer and Head, Regulatory Affairs
Mariam E. Morris	47	Chief Financial Officer
Eugene A. Bauer, M.D.(3)	73	Director
Isaac Blech(1)	65	Vice Chairman of the Board of Directors
Phil Gutry(1)	42	Director, Audit Committee Chair
Uli Hacksell, Ph.D.(3)	64	Chairman of the Board of Directors, Nominating and Corporate Governance Committee Chair
Magnus Persson, M.D., Ph.D.(1)(2)	54	Director
Behshad Sheldon(2)(3)	52	Director, Compensation Committee Chair

(1) Appointed as a member of the Audit Committee effective upon the closing of this offering.

(2) Appointed as a member of the Compensation Committee effective upon the closing of this offering.

(3) Appointed as a member of the Nominating and Corporate Governance Committee effective upon the closing of this offering.

Blake M. Paterson, M.D. Dr. Paterson is one of our founders and has served as our Chief Executive Officer, President and a member of our board of directors since May 2011. Prior to joining our company, Dr. Paterson founded Fells Laboratories LLC, a biotechnology company, where he served as Managing Director from January 2011 through May 2011. Since March 2011, Dr. Paterson has served as a part-time faculty member at the Johns Hopkins School of Medicine in the Division of Neuroanesthesia and Neurological Critical Care in the Department of Anesthesia and Critical Care Medicine. From April 2008 through April 2011, Dr. Paterson owned and operated NRZ Consulting LLC, a translational medicine consulting firm. From February 2004 until March 2008, Dr. Paterson served as the Chief Executive Officer and President for Alba Therapeutics Corporation, or Alba Therapeutics, a clinical-stage biopharmaceutical company. He also served on Alba Therapeutics' board of directors during that time. Prior to founding Alba, Dr. Paterson served in various executive positions at Eli Lilly & Company, or Eli Lilly. Prior to joining Eli Lilly, Dr. Paterson was employed by Parke-Davis Pharmaceutical Research. Dr. Paterson received his B.S. in Engineering from Tufts University and his M.D. from the University of Vermont. Our board of directors believes that Dr. Paterson's intimate knowledge of our company, by virtue of his service as our founder and Chief Executive Officer, and his extensive biopharmaceutical industry experience, provides him with the operational expertise, breadth of knowledge and valuable understanding of our industry qualifies him to serve on our board of directors.

Bernadine Heather Fraser, Ph.D. Dr. Fraser has served as our Vice President, Clinical Operations and Project Management since October 2012 and Senior Director of Project Management from March 2012 through October 2012. Prior to joining our company, Dr. Fraser served as the Senior Director of Preclinical and Clinical Sciences at Anthera Pharmaceuticals Inc., a biopharmaceutical company, from October 2006 through March 2012. She served in a variety of roles at CV Therapeutics, Inc., a biopharmaceutical company, which was acquired by Gilead Sciences, Inc. in 2009, from June 2000 through October 2006. Dr. Fraser received her B.S. in Zoology from the University of British Columbia, her M.S. in Pharmaceutical Sciences from the University of Montana and her Ph.D. in Pharmacology from the University of Alberta. She has also completed a post-doctoral fellowship at the Johns Hopkins University School of Medicine.

John J. Kaiser. Mr. Kaiser has served as our Chief Business Officer since September 2015, as our Chief Commercial Officer from February 2014 to September 2015, and as our Vice President, Commercialization and Business Development from October 2012 to February 2014. Prior to joining our company, Mr. Kaiser served as Senior Director of Business Development & New Ventures of MedAvante, Inc., a global provider of centralized expert psychiatric and neurocognition rating and monitoring services to the pharmaceutical, biotechnology and medical device industries, from July 2011 to September 2012. Mr. Kaiser also founded Denysias Bioscience, LLC, a biopharmaceutical company focused on developing new therapies for neuropsychiatric disorders, where he served as Chief Executive Officer from February 2010 through June 2012. Mr. Kaiser has served as President of Kaiser & Associates Consulting, a boutique consulting firm providing expertise to the biopharmaceutical industry, since November 2009. From February 2008 through November 2009, Mr. Kaiser served as Vice President of Commercial and Business Development at ACADIA Pharmaceuticals Inc., or ACADIA, a specialty pharmaceutical company. Prior to ACADIA, from February 1980 to January 2008, Mr. Kaiser held positions of increasing responsibility at Eli Lilly. Mr. Kaiser received his B.S. in Pharmaceutical Sciences from the James L. Winkle College of Pharmacy at the University of Cincinnati.

Ronald Marcus, M.D. Dr. Marcus has served as our Chief Medical Officer and Head, Regulatory Affairs since May 2015. Prior to joining our company, Dr. Marcus served as the Chief Medical Officer of Spinifex Pharmaceuticals, or Spinifex, a clinical-stage biotechnology company, from May 2014 until March 2015. Before joining Spinifex, Dr. Marcus was employed by Bristol-Meyers Squibb for 23 years, where he held a variety of positions including Executive Director of Neuroscience Global Clinical Research and Group Director of Neuroscience Strategic Unit. Dr. Marcus received his B.A. in Psychology from the University of Virginia and his M.D. from SUNY at Buffalo School of Medicine. Dr. Marcus completed a psychiatry residency at Cornell University Medical Center.

Mariam E. Morris. Ms. Morris has served as our Chief Financial Officer since August 2015 and prior thereto served as our interim Chief Financial Officer since May 2015. Ms. Morris was the sole proprietor of Mariam Morris CPA, a full service tax, accounting and business consulting firm, which she founded in January 2009 and operated until August 2015. Prior to that, Ms. Morris was the Chief Financial Officer of Sucampo Pharmaceuticals, Inc., from February 2004 to July 2009. From 1991 until 2001, Ms. Morris was an auditor for PricewaterhouseCoopers. Ms. Morris received her B.B.A. in Accounting from Texas Tech University and her M.S. in Taxation from Old Dominion University. Ms. Morris is a Certified Public Accountant in the state of Texas.

Eugene A. Bauer, M.D. Dr. Bauer has served on our board of directors since May 2011. Dr. Bauer also co-founded and has served as the Chief Medical Officer and a member of the board of directors of Skintelligence, Inc, now called Dermira, Inc., a dermatology company in the San Francisco Bay Area, since June 2010. Dr. Bauer has also served on the board of directors of Medgenics since March 2001. Dr. Bauer served as the President and Chief Medical Officer of Peplin, Inc., or Peplin, a development-stage dermatology company, from June 2008 through June 2010. Peplin, was acquired by LEO-Pharma in November 2009. Dr. Bauer continued as a consultant with Peplin through June 2010. Dr. Bauer served as the Chief Executive Officer of Neosil, Inc., a development-stage dermatology pharmaceutical company, from 2004 through 2008. Since 2002, Dr. Bauer has served as a Professor (Emeritus) in the School of Medicine at Stanford University. He received his B.S. in Medicine and his M.D. from Northwestern University. Our board of directors believes that Dr. Bauer's strong background of service on the boards of directors of numerous public pharmaceutical companies and his vast industry experience make him a valuable member of our board of directors.

Isaac Blech. Mr. Blech has served on our board of directors since March 2011 and as Vice Chairman of our board of directors since March 2012. Until March 2011, Mr. Blech was retired. Mr. Blech currently serves on a variety of boards of directors. Mr. Blech has served on the board of ContraFect Corporation, a biotechnology company, since August 2011 and Medgenics since May 2011.

Mr. Blech has served as Vice Chairman of Edge Therapeutics, Inc. since January 2013, Centrexion Corp, a biotechnology company, since February 2013 and RestorGenex since November 2013. He has also served on the board of The SpendSmart Payments Company, or SpendSmart, an online and retail payment company, since March 2011 and as Vice Chairman since November 2011. Mr. Blech has served on the board of Premier Alliance Group, Inc., or Premier Alliance, an advisory, consulting and resource service company, since June 2011 and as Vice Chairman since May 2012. Prior to joining our board of directors, Mr. Blech played a role in establishing some of the leading biotechnology companies including Celgene, ICOS Corporation, Pathogenesis Corporation, Nova Pharmaceutical Corporation and Genetic Systems Corporation. Mr. Blech received his B.A. in Medicine from Baruch College. Our board of directors believes that Mr. Blech's experience as a director of several biotechnology and pharmaceutical companies and his experience as a director of a public biopharmaceutical company gives him the qualifications, skills and financial expertise to serve on our board of directors.

Phil Gutry. Mr. Gutry has served on our board of directors since April 2015. Since July 2015, Mr. Gutry has served as Senior Director of business development at Regeron Pharmaceuticals, Inc., an integrated biopharmaceutical company. From May 2011 to June 2015, Mr. Gutry served as a Principal of MPM Capital, Inc., or MPM, a venture capital firm with a focus on the life sciences industry. Prior to joining MPM, Mr. Gutry worked in the Corporate Development Group at Gilead Sciences, Inc., a research-based biopharmaceutical company, for approximately five years. Mr. Gutry previously worked at Riverside Partners, LLC, a healthcare focused private equity investment firm, and at The Wilkerson Group. Mr. Gutry currently serves on the board of directors of Potenza Therapeutics, Inc. and Amphivena Therapeutics, Inc. Mr. Gutry received his A.B. in Earth Sciences from Dartmouth College and an M.B.A. in Healthcare Management from The Wharton School. Our board of directors believes that Mr. Gutry's experience in the biopharmaceutical industry and in venture capital makes him a valuable member of our board of directors.

Uli Hacksell, Ph.D. Dr. Hacksell has served as the Chairman of our board of directors since May 2015. From September 2000 to March 2015, Dr. Hacksell served as the Chief Executive Officer and as a director of ACADIA Pharmaceuticals Inc., or ACADIA. From February 1999 to September 2000, he served as our Executive Vice President of Drug Discovery of ACADIA. Dr. Hacksell held various senior executive positions at Astra AB, or Astra, a pharmaceutical company, including Vice President of Drug Discovery and Technology as well as President of Astra Draco AB, one of Astra's largest research and development subsidiaries, where he directed an organization of more than 1,100 employees. He also served as Vice President of CNS Preclinical R&D at Astra Arcus, another Astra subsidiary. Earlier in his career, Dr. Hacksell held the positions of Professor of Organic Chemistry and Department Chairman at Uppsala University in Sweden and also served as Chairman and Vice Chairman of the European Federation of Medicinal Chemistry. Dr. Hacksell received his Master of Pharmacy and a Ph.D. in Medicinal Chemistry from Uppsala University. Our board of directors believes that Dr. Hacksell brings to the board substantial leadership skills and scientific background that are helpful in its discussions for determining the company's growth strategy and business plans. Furthermore, Dr. Hacksell's leadership abilities and experience make him particularly well qualified to be our Chairman.

Magnus Persson, M.D., Ph.D. Dr. Persson has served on our board of directors since August 2012. Since September 2013, Dr. Persson has served as a Director at Scandinavian Node InnoLIFE at the Karolinksa Institutet in Stockholm, Sweden, where he has also served as an Associate Professor in Physiology since September 1994. Dr. Persson has served as a practicing pediatrician at CityAkuten in Stockholm, Sweden since December 2012. He is also currently the Chief Executive Officer of C10Pharma AS in Oslo, Norway, a preclinical-stage pharmaceutical company, a position he has held since December 2012. Prior to joining our board of directors, Dr. Persson served as a Partner at HealthCap, a Swedish-based venture capital firm, from January 2008 through December 2009, and as a

Managing Partner at The Column Group, a San Francisco-based venture capital firm, from January 2010 through November 2011. From November 2011 until September 2013, Dr. Persson was a Physician at Stockholms Läns Landsting in Stockholm, Sweden. Dr. Persson founded Aerocrine AB, a medical technology company in 1994. Dr. Persson has also served on the boards of Contera AS, a biotechnology company, since December 2011, Karolinska Institutet Innovations AB, a technology transfer company, since December 2011, Galecto AB, a biotechnology company, since January 2013, AscendxSpine Inc., a medical device company, since December 2012, BioWorks AB, a laboratory equipment company, since July 2013 and SLS Ventures AB, a life science venture capital firm since March 2012. Dr. Persson received his M.D. and Ph.D. in physiology from Karolinska Institutet. Our board of directors believes that Dr. Persson's extensive experience in medicine, life sciences and biotechnology financing and his experience founding and leading private as well as public biotechnology and medical technology companies make him a valuable member of our board of directors who will assist in the development of our growth strategy and business plans.

Behshad Sheldon. Ms. Sheldon has served on our board of directors since July 2014. Ms. Sheldon currently serves as a partner of Apple Tree Partners IV, L.P. and the President and Chief Executive Officer of Braeburn Pharmaceuticals, Inc., or Braeburn, a biopharmaceutical company focusing on developing and commercializing products for neurological and psychiatric disorders. Prior to joining Braeburn in September of 2012, Ms. Sheldon served in a variety of roles over a 10 year period at Otsuka Pharmaceutical Co., Ltd., or Otsuka, with her most recent position being Senior Vice President, Patient & Branding Strategy and a member of the board of directors of Otsuka's research and development organization. Prior to Otsuka, Ms. Sheldon held positions with increasing responsibility at SmithKline Beecham Corporation and Bristol-Myers for over 16 years. Ms. Sheldon received her B.S. degree in Neuroscience from the University of Rochester. With more than 27 years of pharmaceutical industry experience, our board of directors believes Ms. Sheldon's extensive expertise in pharmaceutical product development, commercialization and marketing and track record of producing products such as Abilify, Plavix and Glucophage, gives her the qualifications and skills to serve on our board of directors.

Board Composition and Election of Directors

Board Composition

Our board of directors currently consists of seven members, each of whom are elected pursuant to the board composition provisions of our current certificate of incorporation and our stockholders agreement, which agreement is described under "Certain Relationships and Related Party Transactions" in this prospectus. These board composition provisions will terminate upon the closing of this offering. Upon the termination of these provisions, there will be no further contractual obligations regarding the election of our directors. Our nominating and corporate governance committee and board of directors may therefore consider a broad range of factors relating to the qualifications and background of nominees, which may include diversity. We have no formal policy regarding board diversity. Our nominating and corporate governance committee's and board of directors' priority in selecting board members is identification of persons who will further the interests of our stockholders through his or her established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, and professional and personal experiences and expertise relevant to our growth strategy.

Immediately following the closing of this offering, our board of directors will be divided into three staggered classes of directors of the same or nearly the same number and each will be assigned to one of the three classes. At each annual meeting of the stockholders, a class of directors will be elected for a three-year term to succeed the directors of the same class whose terms are then expiring. The terms of the directors will expire upon the election and qualification of successor directors at the annual

meeting of stockholders to be held during the years 2016 for Class I directors, 2017 for Class II directors and 2018 for Class III directors.

- Our Class I directors will be Eugene Bauer and Magnus Persson;
- Our Class II directors will be Isaac Blech and Phil Gutry; and
- Our Class III directors will be Blake Paterson, Uli Hacksell and Behshad Sheldon.

Our amended and restated certificate of incorporation and amended and restated bylaws provide that the number of our directors shall be fixed from time to time by a resolution of the majority of our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class shall consist of one third of the board of directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent stockholder efforts to effect a change of our management or a change in control.

Director Independence

Rule 5605 of the NASDAQ Marketplace Rules, or the NASDAQ Listing Rules, requires that a company listing in connection with its initial public offering must meet the following requirements (1) for its audit, compensation and nominating committees, (a) one member satisfying the independence requirements applicable to such committees described below at the time of listing, (b) a majority of members satisfying such requirements within 90 days of listing, and (c) all members satisfying such requirements within one year of listing; and (2) independent directors compose a majority of the listed company's board of directors 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 committee, compensation committee, and nominating committee (to the extent that the listed company select or recommend director nominees through a nominating committee instead of independent directors constituting a majority of the board of directors' independent directors), be independent and that audit committee members and compensation committee members also satisfy additional independence criteria. Under NASDAQ Listing Rule 5605(a)(2), a director will only qualify as an "independent director" if the person meets the independence criteria listed therein and, in the opinion of our board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Under NASDAQ Listing Rule 5605(c)(2), audit committee members must also meet the independence criteria set forth in Rule 10A 3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, under which a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors or any other board committee: (1) accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries; or (2) be an affiliated person of the listed company or any of its subsidiaries. Under NASDAQ Listing Rule 5605(d)(2), members of the compensation committee must also satisfy additional independence requirements: under which the board of directors of the listed company must consider, in affirmatively determining the independence of a director who will serve on the compensation committee, all factors specifically relevant to determining whether a director has a relationship to the listed company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to, the source of compensation of such director, including any consulting, advisory or other compensatory fee from the listed company, and whether the compensation committee member is affiliated with the listed company, any of its subsidiaries or an affiliate of a subsidiary of the listed company.

In June 2015, our board of directors undertook a review of the composition of our board of directors and its committees and the independence of each director. Based upon information requested

from and provided by each director concerning his or her background, employment and affiliations, including family and other relationships, including those relationships described under "Transactions with Related Persons," our board of directors determined that each of our directors, with the exception of Dr. Paterson, is an "independent director" as that term is defined under Rule 5605(a)(2) of the NASDAQ Listing Rules. Dr. Paterson is not considered independent because he currently serves as our President and Chief Executive Officer. Our board of directors also determined that each 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. In making these determinations regarding the independence of our directors, our board of directors considered the relationships that each such non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining independence, including the beneficial ownership of our capital stock by each non-employee director.

Board Leadership Structure and the Role of the Board in Risk Oversight

Board Leadership Structure

The positions of our chairman of the board of directors and chief executive officer are separated. Separating these positions allows our chief executive officer to focus on our day-to-day business, while allowing the chairman of the board of directors to lead our board of directors in its fundamental role of providing advice to and independent oversight of management. Our board of directors recognizes the time, effort and energy that the chief executive officer must devote to his position in the current business environment, as well as the commitment required to serve as our chairman of the board of directors, particularly as our board of directors' oversight responsibilities continue to grow. Our board of directors also believes that this structure ensures a greater role for the independent directors in the oversight of the company and active participation of the independent directors in setting agendas and establishing priorities and procedures for the work of our board of directors.

Although our amended and restated bylaws that will be in effect immediately prior to the closing of this offering will not require that we separate the chairman of the board of directors and chief executive officer positions, our board of directors believes that having separate positions is the appropriate leadership structure for us at this time. Our board recognizes that depending on the circumstances, other leadership models, such as combining the role of chairman of the board of directors with the role of chief executive officer, might be appropriate. Accordingly, our board may periodically review its leadership structure. Our board of directors believes its administration of its risk oversight function has not affected its leadership structure.

Our independent directors will meet alone in an executive session at no less than four regular meetings of our board of directors each year. The chairman of our board may call additional executive sessions of the independent directors at any time, and the chairman of our board shall call an executive session at the request of a majority of the independent directors. The purpose of these executive sessions is to promote open and candid discussion among non-employee directors.

Role of the Board in Risk Oversight

We face a number of risks, including those described under the caption "Risk Factors" contained elsewhere in this prospectus. Our board of directors believes that risk management is an important part of establishing, updating and executing the company's business strategy. Our board of directors, as a whole and at the committee level, has oversight responsibility relating to risks that could affect the corporate strategy, business objectives, compliance, operations, and the financial condition and performance of the company. Our board of directors focuses its oversight on the most significant risks facing the company and on its processes to identify, prioritize, assess, manage and mitigate those risks. Our board of directors and its committees receive regular reports from members of the company's

senior management on areas of material risk to the company, including strategic, operational, financial, legal and regulatory risks. While our board of directors has an oversight role, management is principally tasked with direct responsibility for management and assessment of risks and the implementation of processes and controls to mitigate their effects on the company.

The audit committee, as part of its responsibilities, oversees the management of financial risks, including accounting matters, liquidity and credit risks, corporate tax positions, insurance coverage, and cash investment strategy and results. The audit committee is also responsible for overseeing the management of risks relating to the performance of the company's internal audit function, if required, and its independent registered public accounting firm, as well as our systems of internal controls and disclosure controls and procedures. The compensation committee is responsible for overseeing the management of risks relating to our executive compensation and overall compensation and benefit strategies, plans, arrangements, practices and policies. The nominating and corporate governance committee oversees the management of risks associated with our overall compliance and corporate governance practices, and the independence and composition of our board of directors. These committees provide regular reports, on at least a quarterly basis, to the full board of directors.

Committees of the Board

Our board of directors has established a standing audit committee and compensation committee, and upon the closing of this offering, we will establish a nominating and corporate governance committee. The composition and responsibilities of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board.

Audit Committee

The audit committee is responsible for assisting our board of directors in its oversight of the integrity of our financial statements, the qualifications and independence of our independent auditors, and our internal financial and accounting controls. The audit committee has direct responsibility for the appointment, compensation, retention (including termination) and oversight of our independent auditors, and our independent auditors report directly to the audit committee. The audit committee also prepares the audit committee report that the SEC requires to be included in our annual proxy statement.

Upon the closing of this offering, the members of the audit committee will be Mr. Gutry, Mr. Blech and Dr. Persson. Mr. Gutry will serve as chair of the audit committee. Each member of the audit committee qualifies as an independent director under the corporate governance standards of the NASDAQ Listing Rules and the independence requirements of Rule 10A-3 of the Exchange Act. Our board of directors has determined that Mr. Gutry qualifies as an "audit committee financial expert" as such term is currently defined in Item 407(d)(5) of Regulation S-K and meets the financial sophistication requirements of the NASDAQ Listing Rules. The audit committee will adopt a written charter that satisfies the applicable standards of the SEC and the NASDAQ Listing Rules, which we will post on our website upon the closing of this offering.

Compensation Committee

The compensation committee approves the compensation objectives for the company, approves the compensation of the chief executive officer and approves or recommends to our board of directors for approval the compensation of other executives. The compensation committee reviews all compensation components, including base salary, bonus, benefits and other perquisites.

Upon the closing of this offering, the members of the compensation committee will be Ms. Sheldon and Dr. Persson. Ms. Sheldon will serve as chair of the compensation committee. Each member of the compensation committee is a non-employee director within the meaning of Rule 16b-3

of the rules promulgated under the Exchange Act, each is an outside director as defined by Section 162(m) of the United States Internal Revenue Code of 1986, as amended, or the Code, and each is an independent director as defined by the NASDAQ Listing Rules, including NASDAQ Listing Rule 5605(d)(2). The compensation committee will adopted a written charter that satisfies the applicable standards of the SEC and the NASDAQ Listing Rules, which we will post on our website upon the closing of this offering.

Nominating and Corporate Governance Committee

Upon the closing of this offering, the nominating and corporate governance committee will be responsible for making recommendations to our board of directors regarding candidates for directorships and the structure and composition of our board and the board committees. In addition, the nominating and corporate governance committee will be responsible for developing and recommending to our board corporate governance guidelines applicable to the company and advising our board on corporate governance matters.

Upon the closing of this offering, the members of the nominating and corporate governance committee will be Dr. Hacksell, Dr. Bauer and Ms. Sheldon. Dr. Hacksell will serve as chair of the nominating and corporate governance committee. Each member of the nominating and corporate governance committee will be an independent director as defined by the NASDAQ Listing Rules. The nominating and corporate governance committee will adopt a written charter that satisfies the applicable standards of the NASDAQ Listing Rules effective upon the closing of this offering and which we will post on our website upon the closing of this offering.

Code of Business Conduct and Ethics

We will adopt a code of business conduct and ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. Upon the closing of this offering, we will post the code of business conduct and ethics on our website. We intend to disclose future amendments to the code or any waivers of its requirements on our website to the extent permitted by the applicable rules and Exchange Act requirements.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has ever been an officer or employee of the company. None of our executive officers serves, or has served since inception, as a member of the board of directors, compensation committee or other board committee performing equivalent functions of any entity that has one or more executive officers serving as one of our directors or on our compensation committee.

EXECUTIVE COMPENSATION

This section discusses the material components of the executive compensation program for our executive officers who are named in the "Summary Compensation Table" below. In 2014, our chief executive officer and our two other highest-paid executive officers, or our named executive officers, were as follows:

- Blake M. Paterson, M.D., President and Chief Executive Officer
- James Vornov, M.D., Ph.D., Chief Medical Officer (Dr. Vornov's employment with the company ended on January 9, 2015)
- John Kaiser, Chief Business Officer

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs that we adopt following the closing of this offering may differ materially from the currently planned programs summarized in this discussion.

Summary Compensation Table

The following table sets forth information for the years ended December 31, 2013 and 2014, regarding compensation awarded to or earned by our named executive officers.

Name and Principal Position	Year	Salary ($)	Bonus ($)(1)	Option Awards ($)(2)	All Other Compensation ($)(3)	Total ($)
Blake M. Paterson, M.D.	2014	390,000	199,063	96,793	218	686,074
President and Chief Executive Officer	2013	325,000	—	—	218	325,218
James Vornov, M.D., Ph.D.	2014	315,000	131,250	38,115	218	484,583
Chief Medical Officer(4)	2013	300,000	—	—	218	300,218
John Kaiser	2014	290,700	116,494	45,738	218	453,150
Chief Business Officer	2013	285,000	—	40,360	129,381	454,741

(1) Each of our named executive officers received a one-time bonus in connection with the issuance of the Series B convertible preferred stock pursuant to the terms of a letter agreement entered between the company and each named executive officer.

(2) The amounts reflect the grant date fair value for option awards granted during 2013 and 2014 in accordance with FASB Topic ASC 718. Compensation will only be realized to the extent the market price of our common stock is greater than the exercise price of such option award. For a detailed description of the assumptions used for purposes of determining the grant date fair value, see Note 11 to the financial statements included elsewhere in this prospectus.

(3) Amount represents the premium amount paid by us for life insurance for each of our named executive officers. For Mr. Kaiser, for the 2013 fiscal year, the amount also consists of a reimbursement of Mr. Kaiser's temporary living expenses for up to six months totaling an aggregate amount of $29,163 and a one time relocation bonus of $100,000.

(4) Dr. Vornov's employment with the company ended on January 9, 2015.

Narrative to Summary Compensation Table

We review compensation annually for all employees, including our executives. In setting executive base salaries and bonuses and granting equity incentive awards, we consider compensation for comparable positions in the market, individual performance as compared to our expectations and

objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders, and a long-term commitment to our company.

Our board of directors has historically determined our executives' compensation. Our compensation committee typically reviews and discusses management's proposed compensation with the chief executive officer for all executives other than the chief executive officer. Based on those discussions and its discretion, the compensation committee then recommends the compensation for each executive officer. Our board of directors, without members of management present, discusses the compensation committee's recommendations and ultimately approves the compensation of our executive officers. To date, our compensation committee has used Radford data, with or without a compensation consultant from Radford, for privately held, similarly sized, biotech companies for purposes of determining executive compensation. The compensation committee has used the 50th percentile for bonus and the 75th percentile for equity for the 2013 fiscal year and there were no changes made for the 2014 fiscal year. We engaged Radford as our compensation consultant. Based on Radford's recommendations, our compensation committee and board of directors approved base salaries and target discretionary bonuses described below.

Annual Base Salary

The following table presents the base salaries for each of our named executive officers for the 2014 and 2015 fiscal years.

Name	2014 Base Salary ($)	Pre-IPO 2015 Base Salary ($)(1)	Post-IPO Base Salary ($)
Blake M. Paterson, M.D.	390,000	390,000	415,000
James Vornov, M.D., Ph.D.(1)	315,000	315,000	—
John Kaiser	290,700	290,700	297,000

(1) Dr. Vornov's employment with the company ended on January 9, 2015.

Annual Bonus

Our discretionary bonus plan motivates and rewards our executives for achievements relative to our goals and expectations for each fiscal year. None of our named executive officers received a bonus relative to achievement of goals for the 2014 fiscal year, although our executives did receive a bonus during the 2014 fiscal year following the issuance of our Series B convertible preferred stock for foregoing salary prior to the consummation of the issuance. Following the effective date of the registration statement for this offering, Dr. Paterson's target bonus will be 50% of his base salary and Mr. Kaiser's target bonus will be 30% of his base salary.

Long-Term Incentives

Our 2011 Stock Incentive Plan authorizes us to make grants to eligible recipients of non-qualified stock options, incentive stock options, restricted stock awards, restricted stock units and other forms of awards, such as stock appreciation rights. While we have made restricted stock awards to our executive officers in the past, our equity grants during 2014 to our executive officers were only in the form of stock options.

Our board of directors adopted a new 2015 Omnibus Incentive Compensation Plan, or 2015 Omnibus Plan, which was approved by our stockholders on August 31, 2015, and is described in more detail under "—2011 Stock Incentive Plan and 2015 Omnibus Incentive Compensation Plan." The 2015 Omnibus Plan will become effective upon the business day immediately preceding the date on which

the registration statement is declared effective by the SEC and will replace our 2011 Stock Incentive Plan.

Other Compensation

All amounts shown in the "All Other Compensation" column in the Summary Compensation Table relate to premiums paid by us for life insurance policies for Mr. Paterson, Mr. Vornov and Mr. Kaiser.

Employment Arrangements

Please see "—Offer Letters" for information regarding the employment and severance agreements for each of our named executive officers.

Outstanding Equity Awards at 2014 Fiscal Year End Table

The following table presents information regarding all outstanding stock options held by each of our named executive officers on December 31, 2014.

Name	Grant Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price	Option Expiration Date
Blake Paterson	5/8/2012	71,428	35,714(1)	$ 8.68	2/28/2022
	7/10/2014	54,353	—(2)	$ 16.80	2/28/2024
James Vornov	11/9/2012	9,523	4,761(3)	$ 8.68	10/31/2022
	7/10/2014	16,071	—(2)	$ 10.08	2/28/2024
John J. Kaiser	11/9/2012	9,523	4,761(3)	$ 8.68	10/31/2022
	8/29/2013	2,380	4,761(4)	$ 8.96	5/31/2023
	7/10/2014	19,285	—(2)	$ 10.08	2/28/2024

(1) Such stock option vests in four equal annual installments on each February 24 occurring in 2012, 2013, 2014 and 2015.

(2) Such stock options were fully vested on the date of grant.

(3) Such stock option vests in four equal annual installments on each October 15 occurring in 2012, 2013, 2014 and 2015. The shares of our common stock underlying such stock option were forfeited in connection with Dr. Vornov's resignation.

(4) Such stock option vests in four equal annual installments on each May 6 occurring in 2013, 2014, 2015 and 2016.

Offer Letters

Blake M. Paterson, M.D.

Dr. Paterson entered into an offer letter with the company effective May 1, 2011. The offer letter provides for an annual base salary of $250,000, with an automatic increase to $275,000, effective May 1, 2012, and another automatic increase to $300,000, effective May 1, 2013. Dr. Paterson's annual base salary may be further increased from time to time. Dr. Paterson's base salary as of December 31, 2014 was $ 390,000. Upon execution of the offer letter, Dr. Paterson was entitled to receive a $100,000 signing bonus. In addition, Dr. Paterson is eligible to receive a discretionary annual bonus as determined by our board of directors or the compensation committee of the board, referred to the compensation committee, in its sole discretion, provided that Dr. Paterson is employed by the company

on the applicable bonus payment date. Such annual discretionary bonus may be paid in the form of cash or equity awards, consistent with bonuses paid to chief executive officers of similarly situated companies in the biotechnology industry, subject to corporate and individual performance. The offer letter provides that Dr. Paterson agreed to purchase 107,142 shares of restricted common stock, which restricted stock was subject to vesting as to one third of the shares on May 1 of each of 2012, 2013 and 2014, subject to Dr. Paterson's continued employment on the applicable vesting dates and the terms of the 2011 Stock Incentive Plan. However, in September 2011, the restrictions were modified so that all of the shares vested at that time.

Pursuant to the terms of Dr. Paterson's offer letter, if Dr. Paterson's employment is terminated for any reason, then the company will pay Dr. Paterson his base salary, bonus and expenses accrued, but unpaid as of the date of his termination, and any benefits accrued and due under any applicable benefit plans and programs of the company.

If Dr. Paterson's employment is terminated on account of his death or disability, and provided that Dr. Paterson complies with the restrictive covenants set forth in the offer letter and executes and does not revoke a release of claims in favor of the company in the case of termination on account of disability, he will be entitled to a pro rata average bonus, which for purposes of the offer letter means the average of the annual full-year cash bonuses he received from the company for the three completed calendar years prior to termination (or fewer full year periods if the employment term is less than three years, with 2011 being deemed a full year of service and any prorated bonus paid for 2011 being adjusted upward for the full year for purposes of such calculation), prorated for the portion of the year in which such termination occurred, paid over 12 equal monthly installments.

If Dr. Paterson's employment is terminated by the company without cause or by Dr. Paterson for good reason, provided he complies with the restrictive covenants set forth in the offer letter and executes and does not revoke a release of claims in favor of the company, Dr. Paterson is entitled to an amount equal to the sum of (i) 12 months of his then-current base salary and (ii) a pro rata average bonus, payable in 12 equal monthly installments. In addition, Dr. Paterson is entitled to company-paid COBRA premiums for 12 months or until he is eligible for substantially equal coverage, and full vesting of the restricted stock award purchased in connection with his commencement of employment and any future stock option or stock award.

The offer letter provides that at all times during Dr. Paterson's employment and thereafter, Dr. Paterson will maintain the confidentiality of all confidential information obtained by him as a result of his employment with the company, assign all inventions and not disparage the company or any of its officers, directors, employees, shareholders or products. In addition, during the term of Dr. Paterson's employment with the company, and for the 12 month period after Dr. Paterson's termination of employment, Dr. Paterson cannot (i) compete against the company, (ii) interfere with the relationships between the company and any of its subsidiaries, affiliates or any of their respective vendors or licensors, or (iii) recruit in any way the employees of the company.

James Vornov, M.D., Ph.D.

Dr. Vornov entered into an offer letter with the company effective October 15, 2012. The offer letter provides for an annual base salary of $300,000, which, beginning February 2014, will be reviewed annually and may be increased by our board of directors. Dr. Vornov is eligible to receive a discretionary annual bonus as determined by our board of directors or the compensation committee, in its sole discretion, provided that Dr. Vornov is employed by the company on the applicable bonus payment date. Such annual discretionary bonus may be paid in the form of cash or equity awards, consistent with bonuses paid the executives of similar grade of similarly situated companies on the biotechnology industry, subject to corporate and individual performance. In addition, the offer letter provides that, subject to approval by our board of directors, Dr. Vornov will receive a stock option to

purchase 14,285 shares of common stock, which is subject to vesting as to one third of the shares on October 15 of each of 2013, 2014 and 2015, subject to Dr. Vornov's continued employment on the applicable vesting dates and the terms of the 2011 Stock Incentive Plan.

Pursuant to the terms of Dr. Vornov's offer letter, if Dr. Vornov's employment is terminated for any reason, then the company will pay Dr. Vornov his base salary, bonus and expenses accrued, but unpaid as of the date of his termination, and any benefits accrued and due under any applicable benefit plans and programs of the company. Dr. Vornov's resigned from his employment with the company on January 9, 2015 and was paid salary and accrued vacation through such date.

The offer letter provides that at all times during Dr. Vornov's employment and thereafter, Dr. Vornov will maintain the confidentiality of all confidential information obtained by him as a result of his employment with the company, assign all inventions and not disparage the company or any of its officers, directors, employees, shareholders or products. In addition, during the term of Dr. Vornov's employment with the company, and for the 12 month period after Dr. Vornov's termination of employment, Dr. Vornov cannot (i) compete against the company, (ii) interfere with the relationships between the company and any of its subsidiaries, affiliates or any of their respective vendors or licensors, or (iii) recruit in any way the employees of the company.

John Kaiser

Mr. Kaiser entered into an offer letter with the company effective October 15, 2012. The offer letter provides for an annual base salary of $285,000. Mr. Kaiser's annual base salary may be further increased from time to time. In connection with Mr. Kaiser's commencement of employment, he was entitled to reimbursement of temporary living expenses up to six months, and a relocation bonus of $100,000. A pro-rata portion of the relocation bonus must be repaid to the company if his employment is terminated for cause or he resigns voluntarily within 18 months after commencement of employment. Mr. Kaiser is eligible to receive a discretionary annual bonus as determined by our board of directors or the compensation committee, in its sole discretion, provided that Mr. Kaiser is employed by the company on the applicable bonus payment date. Such annual discretionary bonus may be paid in the form of cash or equity awards, consistent with bonuses paid the executives of similar grade of similarly situated companies on the biotechnology industry, subject to corporate and individual performance. In addition, the offer letter provides that, subject to approval by our board of directors, Mr. Kaiser will receive a stock option to purchase 14,285 shares of common stock, which is subject to vesting as to one third of the shares on October 15 of each of 2013, 2014 and 2015, subject to Mr. Kaiser's continued employment on the applicable vesting dates and the terms of the 2011 Stock Incentive Plan.

Pursuant to the terms of Mr. Kaiser's offer letter, if Mr. Kaiser's employment is terminated for any reason, then the company will pay Mr. Kaiser his base salary, bonus and expenses accrued, but unpaid as of the date of his termination, and any benefits accrued and due under any applicable benefit plans and programs of the company.

If Mr. Kaiser's employment is terminated by the company without cause or by Mr. Kaiser for good reason, provided he complies with the restrictive covenants set forth in the offer letter and executes and does not revoke a release of claims in favor of the company, Mr. Kaiser is entitled to an amount equal to 12 months of his then-current base salary, payable in 12 equal monthly installments. In addition, Mr. Kaiser is entitled to company-paid COBRA premiums for 12 months or until he is eligible for substantially equal coverage, and full vesting of the stock option award.

The offer letter provides that at all times during Mr. Kaiser's employment and thereafter, Mr. Kaiser will maintain the confidentiality of all confidential information obtained by him as a result of his employment with the company, assign all inventions and not disparage the company or any of its officers, directors, employees, shareholders or products. In addition, during the term of Mr. Kaiser's employment with the company, and for the 12 month period after Mr. Kaiser's termination of

employment, Mr. Kaiser cannot (i) compete against the company, (ii) interfere with the relationships between the company and any of its subsidiaries, affiliates or any of their respective vendors or licensors, or (iii) recruit in any way the employees of the company.

For purposes of the offer letters, termination for "good reason" generally means a termination initiated by the employee in response to one or more of the following events: (i) a material diminution in the employee's duties, authorities or responsibilities, (ii) a requirement by the company that the employee's principal place of work be permanently moved to a location more than 50 miles away from Baltimore, Maryland, or (iii) the company material breach of the offer letter, including a diminution of base salary. In order for a termination to be on account of good reason, the employee must notify the company of his intention to terminate for good reason, the company has an opportunity to cure the action or omission that constitutes the ground for good reason and the named executive officer must terminate employment for good reason shortly after the end of the company's cure period. In addition, Mr. Kaiser may invoke good reason in the event that the company fails to nominate him as a member of our board of directors. The employee is required to provide the company with a written notice detailing the specific circumstances alleged to constitute good reason within 30 days after the first occurrence of such circumstances, and the company shall have 30 days following the receipt of such notice to cure the alleged good reason event.

Termination for "cause" generally includes the following: (i) the employee's willful misconduct or gross negligence in the performance of his duties to the company not cured within 30 days after notice, (ii) the employee's failure to perform his duties to the company or to follow the lawful directives of our board of directors that is not cured within 30 days after notice, (iii) the employee's commission of, indictment for, conviction of, or pleading of guilty or nolo contendere to, a felony or any crime involving moral turpitude, or (iv) any act of theft, fraud, malfeasance or dishonesty in connection with the performance of the employee's duties to the company, or (v) a material breach of the offer letter or any other agreement with the company, or a material violation of the company's code of conduct or other written policy that is not cured within 30 days after notice.

2011 Stock Incentive Plan and 2015 Omnibus Incentive Compensation Plan

2011 Stock Incentive Plan

Our board of directors and stockholders adopted the 2011 Stock Incentive Plan on April 28, 2011. The 2011 Stock Incentive Plan was amended on January 10, 2012 and on May 6, 2013 to increase the number of shares authorized for issuance thereunder. On June 26, 2015, our board of directors adopted the 2015 Omnibus Plan, which was approved by our stockholders on August 31, 2015. Our 2015 Omnibus Plan will become effective upon the business day immediately preceding the date on which the registration statement is declared effective by the SEC.

As of the effective date of our 2015 Omnibus Plan, our 2011 Stock Incentive Plan will be merged with and into our 2015 Omnibus Plan and no additional grants will be made thereafter under our 2011 Stock Incentive Plan. Outstanding grants under our 2011 Stock Incentive Plan will continue in effect according to their terms as in effect before our 2015 Omnibus Plan merger, and the shares with respect to outstanding grants under our 2011 Stock Incentive Plan will be issued or transferred under our 2015 Omnibus Plan.

Types of Stock Awards

The 2011 Stock Incentive Plan provides for the grant of stock options (incentive stock options and non-qualified stock options), restricted stock awards and other stock-based awards, which are collectively referred to as stock awards. Other stock-based awards are awards of common stock and other awards (including cash) that are valued in whole or in part by reference to, or are payable in or otherwise based on, our common stock and may include, without limitation, restricted stock units,

performance share awards or an award valued by reference to an affiliate of the company. Stock awards may be granted to employees, including officers, non-employee directors and consultants of the company or our affiliates, except that incentive stock options may be granted only to employees.

Share Reserve

The aggregate number of shares of our common stock that have been reserved for issuance under the 2011 Stock Incentive Plan is 704,428 shares. The number of shares of our common stock available for future issuance under our 2011 Stock Incentive Plan will be available for issuance under our 2015 Omnibus Plan upon the effectiveness of the 2015 Omnibus Plan. If a stock award granted under the 2011 Stock Incentive Plan expires, terminates, is canceled or is forfeited for any reason, the number of shares subject to the stock award will again be available for purposes of stock awards under the 2011 Stock Incentive Plan. In addition, if stock awards are settled in cash, the share reserve will be reduced by the number of shares of common stock with a value equal to the amount of the cash distributions as of the time that such amount was determined and if stock options are exercised using net exercise, the share reserve will be reduced by the gross number of shares of common stock subject to the exercised portion of the option. Since inception 465,939 shares have been granted under the 2011 Stock Incentive Plan and 167,857 shares have been granted outside of the 2011 Stock Incentive Plan.

Administration

Our board of directors or a duly authorized committee thereof, has the authority to administer the 2011 Stock Incentive Plan. Subject to the terms of the 2011 Stock Incentive Plan, our board of directors or the authorized committee, referred to herein as the committee, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of exercisability and vesting schedule applicable to a stock award. Subject to the limitations set forth below, the committee will also determine the exercise price, strike price or purchase price of awards granted and the types of consideration to be paid for the award. The committee has the authority to modify outstanding awards under the 2011 Stock Incentive Plan. The committee has the authority to adopt, alter and repeal administrative rules, guidelines and practices governing the 2011 Stock Incentive Plan and to perform all other acts, including delegating administrative responsibilities, as it deems advisable to construe and interpret the terms and provisions of the 2011 Stock Incentive Plan and any stock award granted under the 2011 Stock Incentive Plan. Decisions and interpretations or other actions by the committee are in the discretion of the committee and are final binding and conclusive on the company and all participants in the 2011 Stock Incentive Plan.

Stock Options

Incentive stock options and non-qualified stock options are granted pursuant to stock option agreements adopted by the committee. The committee determines the exercise price for a stock option, within the terms and conditions of the 2011 Stock Incentive Plan, provided that the exercise price of a stock option cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2011 Stock Incentive Plan will become exercisable at the rate specified by the committee and may be exercisable for restricted stock, if determined by the committee.

The committee determines the term of stock options granted under the 2011 Stock Incentive Plan, up to a maximum of ten years. Unless the terms of an option holder's stock option agreement provide otherwise, if an option holder's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, or voluntary resignation, the option holder may generally exercise any vested options for a period of 90 days following the cessation of service. If the options holder's service relationship terminates due to voluntary resignation, the option holder may generally exercise any vested options for a period of 30 days following cessation of service. The option term may

be extended in the event that exercise of the option following such a termination of service is prohibited by applicable securities laws or our insider trading policy. If an option holder's service relationship with us or any of our affiliates ceases due to disability or death, or an option holder dies within a certain period following cessation of service, the option holder or a beneficiary may generally exercise any vested options for a period of one year following the option holder's disability or death. Unless otherwise provided by the committee at the time a stock option is granted, in the event of a termination for cause, or the participant violates certain restrictive covenants, including but not limited to, nondisclosure of confidential information, non-solicitation, non-competition and non-disparagement provisions set forth in the 2011 Stock Incentive Plan, referred to as detrimental activity, in any case, before the stock option is exercised, then the stock option will terminate. If an option holder engages in detrimental activity within one year following the later of the date the stock option is exercised or becomes vested, then option holder must pay back to the company any gain realized as a result of exercise. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the committee and may include (i) cash, check, bank draft or money order, (ii) if the company's common stock is publicly traded, a broker-assisted cashless exercise, or (iii) such other methods as may be approved by the committee, including without limitation, the tender of shares of our common stock previously owned by the option holder or a net exercise of the option.

Unless the committee provides otherwise, options generally are not transferable except by will, the laws of descent and distribution. The committee may provide that a non-qualified stock option may be transferred to a family member, as such term is defined under the applicable securities laws.

The committee may at any time offer to buy out a stock option previously granted, based on the terms established by the committee and communicated to the option holder at the time the offer is made.

Tax Limitations on Incentive Stock Options

The aggregate fair market value, determined at the time of grant, of our common stock with respect to incentive stock options that are exercisable for the first time by an option holder during any calendar year may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as non-qualified stock options. No incentive stock option may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (i) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant, and (ii) the term of the incentive stock option does not exceed five years from the date of grant.

Restricted Stock Awards

Restricted stock awards are granted pursuant to restricted stock award agreements adopted by the committee. Restricted stock awards may be granted for a purchase price, or no purchase price, and either alone or in addition to other stock awards granted under the 2011 Stock Incentive Plan. The committee determines the purchase price, if any, the vesting schedule, if any, and he rights to acceleration of any vesting schedule, and all other terms and conditions of each restricted stock award. Common stock acquired under a restricted stock award may, but need not, be subject to a share repurchase option in our favor in accordance with a vesting schedule to be determined by the committee. Rights to acquire shares under a restricted stock award may not be transferred. Except as otherwise provided in the applicable award agreement, restricted stock unit awards that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

Unless otherwise provided by the committee at the time a restricted stock award is granted, in the event a participant engages in detrimental activity prior to or during the one year period after the

vesting of restricted stock, the committee may direct that all unvested restricted stock will be immediately forfeited and that the participant must pay to the company an amount equal to the fair market value at the time of vesting of any restricted stock that vested prior to the participant's engagement in the detrimental activity. If an option holder engages in detrimental activity within one year following the later of the date the stock option is exercised or becomes vested, then option holder must pay back to the company any gain realized as a result of exercise. In no event may an option be exercised beyond the expiration of its term.

Other Stock Awards

The committee may grant other awards based in whole or in part by reference to our common stock. The committee will set the number of shares under the stock award and all other terms and conditions of such awards.

Changes to Capital Structure

In the event that there is a specified type of change in our capital structure, such as a stock split or recapitalization, appropriate adjustments will be made to (i) the aggregate number and kind of shares that may be issued under the 2011 Stock Incentive Plan, (ii) the number and/or kind of shares or other property (including cash) that can be issued upon exercise of an outstanding stock award or under other stock awards granted under the plan, and (iii) the purchase price thereof.

Acquisition Event

In the event of an acquisition event, the committee may terminate all outstanding and unexercised stock options or any other stock-based award that provides for a participant to exercise the stock award, effective as of the date of the acquisition event, by delivering notice of termination to each participant at least 20 days prior to the date of consummation of the event. The participant may exercise the stock awards during the notice period, contingent upon the occurrence of the acquisition event, to the extent vested (or without regard to limitation of exercisability, as determined by the committee). All such stock awards not exercised will be forfeited in connection with the acquisition event. The committee retains the right to terminate any such exercisable stock award for which the exercise price is equal to or exceeds the fair market value without payment of consideration therefor.

For purposes of the 2011 Stock Incentive Plan, an acquisition event is a merger or consolidation in which the company is not the surviving entity, any transaction that results in the acquisition of all or substantially all of the company's outstanding common stock by a single person or entity or by a group of persons and/or entities acting in concert, or the sale or transfer of all or substantially all of the company's assets.

Change of Control

In the event of a change of control, the committee has the discretion to take any of the following actions with respect to stock awards:

- arrange for the substitution of a stock award by a surviving or acquiring entity or parent company;
- accelerate the vesting of the stock award; or
- cancel stock awards for fair value, which, in the case of options, may equal the excess, if any, of (a) the value of the property to be received in the change of control to holders of the same number of shares of common stock subject to the stock option, over (b) the exercise price otherwise payable in connection with the stock award.

The committee is not obligated to treat all stock awards, even those that are of the same type, in the same manner.

Under the 2011 Stock Incentive Plan, a change of control is generally (i) the acquisition by a person or entity, other than a corporation owned directly or indirectly by the stockholders of the company in substantially the same proportions as their ownership of stock of the company, of more than 50% of our combined voting power; (ii) a consummated merger, or consolidation, other than a merger or consolidation which would result in the voting securities of the company outstanding immediately prior thereto continuing to represent the total voting power represented by the voting securities of the company or such surviving entity outstanding immediately after such merger or consolidation; (iii) a consummated sale or other disposition of all or substantially of our assets; or (iv) the dissolution, liquidation or winding up of the company.

Company Call Rights; Right of First Refusal; Approved Sale

Upon termination of employment or service, the company has certain call rights with respect to our common stock obtained through exercise of stock options, through restricted stock or other stock-based awards. The company's purchase price is based on the reason for the participant's termination. In addition, the company has rights of first refusal in the event a participant desires to transfer shares obtained pursuant to an awards under the 2011 Stock Incentive Plan. If the board of directors and stockholders having the requisite voting power at law and under the company's governing documents approve a sale of all or substantially all of the assets of the company or a sale of all or substantially all of the shares of common stock to an independent third party or group of independent third parties, then each holder of shares of common stock issued pursuant to an award under the 2011 Stock Incentive Plan is required to vote for, consent to and raise no objections to such sale, and generally shall be subject to the same terms and restrictions as the other stockholders participating in the sale, referred to as drag-along rights. The company's call rights, right of first refusal and drag-along rights will terminate upon the effectiveness of this offering.

Amendment and Termination

Our board of directors or the committee has the authority to amend, suspend, or terminate the 2011 Stock Incentive Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. Unless approved by stockholders, if required, no amendment may increase shares of our common stock available for issuance under the 2011 Stock Incentive Plan, change the classification of individuals eligible to receive stock awards under the 2011 Stock Incentive Plan, decrease the minimum exercise price of stock options, extend the maximum stock option term or require stockholder approval in order to continue to comply with the rules under the Code for incentive stock options.

2015 Omnibus Plan

Introduction

Our 2015 Omnibus Plan was adopted by our board of directors on June 26, 2015 and approved by our stockholders on August 31, 2015. Our 2015 Omnibus Plan will become effective immediately prior to the effective date of the registration statement for this offering.

Purpose and Types of Grants

The purpose of our 2015 Omnibus Plan is to attract and retain employees, non-employee directors and consultants and advisors. Our 2015 Omnibus Plan provides for the issuance of incentive stock options, non-qualified stock options, stock awards, stock units, stock appreciation rights, other stock-based awards and cash bonus awards. Our 2015 Omnibus Plan also provides for the issuance of equity and cash bonus awards that are intended to qualify as "qualified performance-based compensation" for purposes of Section 162(m) of the Internal Revenue Code of 1986, as amended, which we refer to as the Internal Revenue Code, to selected executive employees, or qualified performance grants. Our 2015

Omnibus Plan is intended to provide an incentive to participants to contribute to our economic success by aligning the economic interests of participants with those of our stockholders.

Administration

Our 2015 Omnibus Plan will be administered by our compensation committee, and our compensation committee will determine all of the terms and conditions applicable to grants under our 2015 Omnibus Plan. Our compensation committee will also determine who will receive grants under our 2015 Omnibus Plan and the number of shares of common stock that will be subject to grants, except that grants to members of our compensation committee must be authorized by a disinterested majority of our board of directors.

Grants

Subject to adjustment, our 2015 Omnibus Plan authorizes the issuance or transfer of up to the sum of the following: (i) 890,815 new shares, plus (ii) the number of shares of our common stock subject to outstanding grants under our 2011 Stock Incentive Plan as of the effective date of the 2015 Omnibus Plan, plus (iii) the number of shares of our common stock remaining available for issuance under the 2011 Stock Incentive Plan but not subject to previously exercised or paid grants as of the effective date of the 2015 Omnibus Plan. During the term of our 2015 Omnibus Plan, the share reserve will automatically increase on the first trading day in January of each calendar year, beginning in calendar year 2016, by an amount equal 3% of the total number of outstanding shares of common stock on the last trading day in December of the prior calendar year.

If any options or stock appreciation rights, including outstanding options and stock appreciation rights granted under our 2011 Stock Incentive Plan, terminate, expire or are canceled, forfeited, exchanged or surrendered without having been exercised or if any stock awards, stock units or other stock-based awards, including outstanding awards granted under our 2011 Stock Incentive Plan, are forfeited, terminated or otherwise not paid in full, the shares subject to such grants will again be available for purposes of our 2015 Omnibus Plan. In addition, if any shares of our common stock are surrendered in payment of the exercise price of an option or stock appreciation right, the number of shares available for issuance under our 2015 Omnibus Plan will be reduced only by the net number of shares actually issued upon exercise and not by the total number of shares under which such option or stock appreciation right is exercised. If shares of our common stock are withheld in satisfaction of the withholding taxes incurred in connection with the issuance, vesting or exercise of any grant or the issuance of our common stock, then the number of shares of our common stock available for issuance under our 2015 Omnibus Plan shall be reduced by the net number of shares issued, vested or exercised under such grant. If any grants are paid in cash, and not in shares of our common stock, any shares of our common stock subject to such grants will also be available for future grants.

With respect to grants that are intended to meet the requirements for "qualified performance-based compensation" under Section 162(m) of the Internal Revenue Code, our 2015 Omnibus Plan contains the following annual limits, subject to adjustment as described in our 2015 Omnibus Plan:

- the maximum number of shares of our common stock for which grants measured in shares may be awarded to any employee in any calendar year shall not exceed 500,000 shares;
- the maximum dollar amount for which grants measured in cash dollars (other than bonus awards) that may be awarded to any employee in any calendar year shall not exceed $3,500,000;
- the maximum aggregate amount of dividends and dividend equivalents that an employee may accrue in any calendar year shall not exceed $35,000; and
- the maximum dollar amount that may be paid to an employee under bonus awards with respect to each 12-month period within a performance period shall not exceed $500,000 in the aggregate.

The 2015 Omnibus Plan also limits awards to non-employee directors during any calendar year to 300,000 shares of our common stock, subject to adjustment as described in our 2015 Omnibus Plan.

Adjustments

In connection with stock splits, stock dividends, recapitalizations and certain other events affecting our common stock, our compensation committee will make adjustments as it deems appropriate in the maximum number of shares of common stock reserved for issuance as grants, the maximum number of shares of common stock that any individual participating in our 2015 Omnibus Plan may be granted in any year, the number and kind of shares covered by outstanding grants, the kind of shares that may be issued or transferred under our 2015 Omnibus Plan, the price per share or market value of any outstanding grants, the exercise price of options, the base amount of stock appreciation rights, the performance goals or other terms and conditions as our compensation committee deems appropriate.

Eligibility

All of our employees are eligible to receive grants under our 2015 Omnibus Plan. In addition, our non-employee directors and key advisors who perform services for us may receive grants under our 2015 Omnibus Plan.

Vesting

Our compensation committee determines the vesting of awards granted under our 2015 Omnibus Plan.

Options

Under our 2015 Omnibus Plan, our compensation committee will determine the exercise price of the options granted and may grant options to purchase shares of common stock in such amounts as it determines. Our compensation committee may grant options that are intended to qualify as incentive stock options under Section 422 of the Internal Revenue Code, or non-qualified stock options, which are not intended to so qualify. Incentive stock options may only be granted to our employees. Anyone eligible to participate in our 2015 Omnibus Plan may receive a grant of non-qualified stock options. The exercise price of a stock option granted under our 2015 Omnibus Plan cannot be less than the fair market value of a share of our common stock on the date the option is granted. If an incentive stock option is granted to a 10% stockholder, the exercise price cannot be less than 110% of the fair market value of a share of our common stock on the date the option is granted. The exercise price for any option is generally payable in cash; in certain circumstances as permitted by our compensation committee, by the surrender of shares of our common stock with an aggregate fair market value on the date the option is exercised equal to the exercise price; by payment through a broker in accordance with procedures established by the Federal Reserve Board; by surrender of the vested portion of the option to us for an appreciation distribution payable in shares of our common stock with a fair market value at the time of the option surrender equal to the dollar amount by which the then fair market value of the shares of our common stock subject to the surrendered portion exceeds the aggregate exercise price. The term of an option cannot exceed ten years from the date of grant, except that if an incentive stock option is granted to a 10% stockholder, the term cannot exceed five years from the date of grant.

Except as provided in the grant instrument, an option may only be exercised while a participant is employed by or providing service to us. Our compensation committee will determine in the grant instrument under what circumstances and during what time periods a participant may exercise an option after termination of employment,

Stock Appreciation Rights

Under our 2015 Omnibus Plan, our compensation committee may grant stock appreciation rights, which may be granted separately or in tandem with any option. Stock appreciation rights granted with a non-qualified stock option may be granted either at the time the non-qualified stock option is granted or any time thereafter while the option remains outstanding. Stock appreciation rights granted with an incentive stock option may be granted only at the time the grant of the incentive stock option is made. Our compensation committee will establish the base amount of the stock appreciation right at the time the stock appreciation right is granted, which will be equal to or greater than the fair market value of a share of our common stock as of the date of grant. If a stock appreciation right is granted in tandem with an option, the number of stock appreciation rights that are exercisable during a specified period will not exceed the number of shares of our common stock that the participant may purchase upon exercising the related option during such period. Upon exercising the related option, the related stock appreciation rights will terminate, and upon the exercise of a stock appreciation right, the related option will terminate to the extent of an equal number of shares of our common stock. A stock appreciation right is exercisable during the period specified in the grant instrument and is subject to vesting and other restrictions as specified in the grant instrument. Our compensation committee may accelerate the exercisability of any or all outstanding stock appreciation rights at any time for any reason. Generally, stock appreciation rights may only be exercised while the participant is employed by, or providing services to, us. When a participant exercises a stock appreciation right, the participant will receive the excess of the fair market value of the underlying common stock over the base amount of the stock appreciation right. The appreciation of a stock appreciation right will be paid in shares of our common stock, cash or both. The term of a stock appreciation right cannot exceed ten years from the date of grant.

Stock Awards

Under our 2015 Omnibus Plan, our compensation committee may grant stock awards. A stock award is an award of our common stock that may be subject to restrictions as our compensation committee determines. The restrictions, if any, may lapse over a specified period of employment or based on the satisfaction of pre-established criteria, in installments or otherwise, as our compensation committee may determine. Except to the extent restricted under the grant instrument relating to the stock award, a participant will have all of the rights of a stockholder as to those shares, including the right to vote and the right to receive dividends or distributions on the shares. Dividends with respect to stock awards that vest based on performance shall vest if and to the extent that the underlying stock award vests, as determined by our compensation committee. All unvested stock awards are forfeited if the participant's employment or service is terminated for any reason, unless our compensation committee determines otherwise.

Stock Units

Under our 2015 Omnibus Plan, our compensation committee may grant stock units to anyone eligible to participate in our 2015 Omnibus Plan. Stock units are phantom units that represent shares of our common stock. Stock units become payable on terms and conditions determined by our compensation committee and will be payable in cash or shares of our stock as determined by our compensation committee. All unvested stock units are forfeited if the participant's employment or service is terminated for any reason, unless our compensation committee determines otherwise.

Bonus Awards

Under the 2015 Omnibus Plan, our compensation committee may grant cash bonus awards to our employees who are executives or other key employees. Our compensation committee will determine which employees will receive bonus awards and the terms and conditions applicable to each bonus award, including the criteria for vesting.

Other Stock-Based Awards

Under our 2015 Omnibus Plan, our compensation committee may grant other types of awards that are based on, measured by or payable to anyone eligible to participate in our 2015 Omnibus Plan in shares of our common stock. Our compensation committee will determine the terms and conditions of such awards. Other stock-based awards may be payable in cash, shares of our common stock or a combination of the two.

Dividend Equivalents

Under our 2015 Omnibus Plan, our compensation committee may grant dividend equivalents in connection with grants of stock units or other stock-based awards made under our 2015 Omnibus Plan. Dividend equivalents entitle the participant to receive amounts equal to ordinary dividends that are paid on the shares underlying a grant while the grant is outstanding. Our compensation committee will determine whether dividend equivalents will be paid currently or accrued as contingent cash obligations. Dividend equivalents may be paid in cash, in shares of our common stock or in a combination of the two. Our compensation committee will determine the terms and conditions of the dividend equivalent grants, including whether the grants are payable upon the achievement of specific performance goals. Dividend equivalents with respect to stock units or other stock-based awards that vest based on performance shall vest and be paid only if and to the extent that the underlying stock units or other stock-based awards vest and are paid as determined by our compensation committee.

Qualified Performance-Based Compensation

Our 2015 Omnibus Plan permits our compensation committee to impose performance goals that must be met with respect to grants of stock awards, stock units, other stock-based awards, bonus awards, and dividend equivalents that are intended to meet the exception for qualified performance-based compensation under Section 162(m) of the Internal Revenue Code, referred to herein as "qualified performance grants." Prior to or soon after the beginning of a performance period, our compensation committee will establish the performance goals that must be met, the applicable performance periods, the amounts to be paid if the performance goals are met and any other conditions. Our 2015 Omnibus Plan is intended to comply with the transition relief for purposes of Section 162(m) of the Internal Revenue Code, as more fully described below.

The performance goals, to the extent designed to meet the requirements of "qualified performance-based compensation" under Section 162(m) of the Internal Revenue Code, will be based on one or more of the following criteria: cash flow; earnings (including gross margin, earnings before interest and taxes, earnings before taxes, earnings before interest, taxes, depreciation, amortization and charges for stock-based compensation, earnings before interest, taxes, depreciation and amortization, and net earnings); earnings per share; growth in earnings or earnings per share; stock price; return on equity or average stockholder equity; total stockholder return or growth in total stockholder return either directly or in relation to a comparative group; return on capital; return on assets or net assets; revenue, growth in revenue or return on sales; income or net income; operating income, net operating income or net operating income after tax; operating profit or net operating profit; operating margin; return on operating revenue or return on operating profit; regulatory filings; regulatory approvals, litigation and regulatory resolution goals; other operational, regulatory or departmental objectives; budget comparisons; growth in stockholder value relative to established indexes, or another peer group or peer group index; development and implementation of strategic plans and/or organizational restructuring goals; development and implementation of risk and crisis management programs; improvement in workforce diversity; compliance requirements and compliance relief; safety goals; productivity goals; workforce management and succession planning goals; economic value added (including typical adjustments consistently applied from generally accepted accounting principles required to determine economic value added performance measures); measures of customer satisfaction, employee satisfaction or staff development; development or marketing collaborations,

formations of joint ventures or partnerships or the completion of other similar transactions intended to enhance the company's revenue or profitability or enhance its customer base; merger and acquisitions; and other similar criteria consistent with the foregoing.

Change of Control

If we experience a change of control where we are not the surviving corporation (or survive only as a subsidiary of another corporation), unless our compensation committee determines otherwise, all outstanding grants that are not exercised or paid at the time of the change of control will be assumed by, or replaced with grants that have comparable terms by, the surviving corporation (or a parent or subsidiary of the surviving corporation).

Unless a grant instrument provides otherwise, if a participant's employment is terminated by the surviving corporation without cause upon or within 12 months following a change of control, the participant's outstanding grants will fully vest as of the date of termination; provided that if the vesting of any grants is based, in whole or in part, on performance, the applicable grant instrument will specify how the portion of the grant that becomes vested upon a termination following a change in control will be calculated.

If there is a change of control and all outstanding grants are not assumed by, or replaced with grants that have comparable terms by, the surviving corporation, our compensation committee may take any of the following action without the consent of any participant:

- determine that outstanding options and stock appreciation rights will accelerate and become fully exercisable and the restrictions and conditions on outstanding stock awards, stock units, bonus awards, and dividend equivalents immediately lapse;
- pay participants, in an amount and form determined by our compensation committee, in settlement of outstanding stock units, bonus awards, or dividend equivalents;
- require that participants surrender their outstanding stock options and stock appreciation rights in exchange for a payment by the company, in cash or shares of our common stock, equal to the difference between the exercise price and the fair market value of the underlying shares of common stock; provided, however, if the per share fair market value of the common stock does not exceed the per share stock option exercise price or stock appreciation right base amount, as applicable, the company will not be required to make any payment to the participant upon surrender of the stock option or stock appreciation right; or
- after giving participants an opportunity to exercise all of their outstanding stock options and stock appreciation rights, terminate any unexercised stock options and stock appreciation rights on the date determined by our compensation committee.

In general terms, a change of control under our 2015 Omnibus Plan occurs if:

- a person, entity or affiliated group, with certain exceptions, acquires more than 50% of our then outstanding voting securities;
- we merge into another entity unless the holders of our voting shares immediately prior to the merger have at least 50% of the combined voting power of the securities in the merged entity or its parent;
- we merge into another entity and the members of the board of directors prior to the merger would not constitute a majority of the board of the merged entity or its parent;
- we sell or dispose of all or substantially all of our assets;
- we are liquidated or dissolved; or

- a majority of the members of our board of directors is replaced during any 12-month period or less by directors whose appointment or election is not endorsed by a majority of the incumbent directors.

Deferrals

Our compensation committee may permit or require participants to defer receipt of the payment of cash or the delivery of shares of common stock that would otherwise be due to the participant in connection with a grant under our 2015 Omnibus Plan. Our compensation committee will establish the rules and procedures applicable to any such deferrals, consistent with the requirements of Section 409A of the Internal Revenue Code.

Withholding

All grants under the Plan are subject to applicable United States federal (including FICA), state and local, foreign country or other tax withholding requirements. We may require that participants or other persons receiving grants or exercising grants to pay an amount sufficient to satisfy such tax withholding requirements with respect to such grants, or we may deduct from other wages and compensation paid by us the amount of any withholding taxes due with respect to such grant.

Our compensation committee may permit or require that our tax withholding obligation with respect to grants paid in our common stock to be paid by having shares withheld up to an amount that does not exceed the participant's minimum applicable withholding tax rate for United States federal (including FICA), state and local tax liabilities, or as otherwise determined by our compensation committee. In addition, our compensation committee may, in its discretion, and subject to such rules as the compensation committee may adopt, allow participants to elect to have such share withholding applied to all or a portion of the tax withholding obligation arising in connection with any particular grant.

No Repricing

Except in connection with a corporate transaction involving the company (including, without limitation, any stock dividend, distribution (whether in the form of cash, our common stock, other securities or property), stock split, extraordinary cash dividend, recapitalization, change in control, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of shares of our common stock or other securities, or similar transactions), the Company may not, without obtaining stockholder approval, (i) amend the terms of outstanding options or stock appreciation rights to reduce the exercise price of such outstanding options or base price of such stock appreciation rights, (ii) cancel outstanding options or stock appreciation rights in exchange for options or stock appreciation rights with an exercise price or base price, as applicable, that is less than the exercise price or base price of the original options or stock appreciation rights or (iii) cancel outstanding options or stock appreciation rights with an exercise price or base price, as applicable, above the current stock price in exchange for cash or other securities.

Transferability

Except as permitted by our compensation committee with respect to non-qualified stock options, only a participant may exercise rights under a grant during the participant's lifetime. Upon death, the personal representative or other person entitled to succeed to the rights of the participant may exercise such rights. A participant cannot transfer those rights except by will or by the laws of descent and distribution or, with respect to grants other than incentive stock options, pursuant to a domestic relations order. Our compensation committee may provide in a grant instrument that a participant may transfer non-qualified stock options to family members, or one or more trusts or other entities for the benefit or owned by family members, consistent with applicable securities laws.

Amendment; Termination

Our board of directors may amend or terminate our 2015 Omnibus Plan at any time, except that our stockholders must approve an amendment if such approval is required in order to comply with the Internal Revenue Code, applicable laws, or applicable stock exchange requirements. Unless terminated sooner by our board or extended with stockholder approval, our 2015 Omnibus Plan will terminate on the day immediately preceding the tenth anniversary of the date on which the underwriting agreement related to this offering is signed.

Stockholder Approval

The 2015 Omnibus Plan is intended to comply with the transition relief set forth in Treasury Regulation §1.162-27(f)(1) for companies that become publicly held in connection with an initial public offering. Following the transition period set forth therein, if grants are made as "qualified performance-based compensation" , the 2015 Omnibus Plan must be reapproved by our stockholders no later than the first stockholders meeting that occurs after the close of the third calendar year following the calendar year in which the initial public offering occurs, and reapproved by our stockholders no later than the first stockholders meeting that occurs in the fifth year following such stockholder approval, if required by Section 162(m) of the Internal Revenue Code or the regulations thereunder.

Establishment of Sub-Plans

Our board of directors may, from time to time, establish one or more sub-plans under the 2015 Omnibus Plan to satisfy applicable blue sky, securities, or tax laws of various jurisdictions. Our board may establish such sub-plans by adopting supplements to the 2015 Omnibus Plan setting forth limitations on the compensation committee's discretion and such additional terms and conditions not otherwise inconsistent with the 2015 Omnibus Plan, as our board of directors will deem necessary or desirable. All such supplements will be deemed part of the 2015 Omnibus Plan, but each supplement will only apply to participants within the affected jurisdiction.

Clawback

Subject to applicable law, our compensation committee may provide in any grant instrument that if a participant breaches any restrictive covenant agreement between the participant and us, or otherwise engages in activities that constitute cause (as defined in our 2015 Omnibus Plan) either while employed by, or providing services to, us or within a specified period of time thereafter, all grants held by the participant will terminate, and we may rescind any exercise of an option or stock appreciation right and the vesting of any other grant and delivery of shares upon such exercise or vesting, as applicable on such terms as our compensation committee will determine, including the right to require that in the event of any rescission:

- the participant must return the shares received upon the exercise of any option or stock appreciation right and/or the vesting and payment of any other grants; or

- if the participant no longer owns the shares, the participant must pay to us the amount of any gain realized or payment received as a result of any sale or other disposition of the shares (if the participant transferred the shares by gift or without consideration, then the fair market value of the share on the date of the breach of the restrictive covenant agreement or activity constituting cause), net of the price originally paid by the participant for the shares.

Our compensation committee may also provide for clawbacks pursuant to the applicable clawback policy, which may be amended from time to time, adopted by our board of directors. Payment by the participant will be made in such manner and on such terms and conditions as may be required by our compensation committee. We will be entitled to set off against the amount of any such payment any amounts that we otherwise owe to the participant.

Our compensation committee and board of directors approved grants of nonqualified stock options under our 2015 Omnibus Plan to each of our named executive officers that become effective upon the effective date of the registration statement for this offering with an exercise price equal to the initial public offering price. These time-based option grants vest based upon continued employment or service over a four-year period with 25% vesting on the first anniversary of the date of grant and the balance vesting in 36 substantially equal monthly installments thereafter. The number of shares of common stock underlying the options granted to our named executive officers in connection with this offering are set forth in the table below:

Name	Shares Underlying Time-Based Options
Blake Paterson	140,000
John Kaiser	40,000

401(k) Plan

Our named executive officers participate in our broad-based 401(k) savings plan offered to all full time employees of the company. There is no mandatory matching or other employer contribution provided by the company during the year. Annually, the benefits committee determines if a discretionary match or other discretionary employer contribution is to be made. If made, any discretionary match or other employer contribution will vest over a six-year graded vesting schedule so that 20% vests each year of service. Vesting is accelerated upon death, disability and termination of the plan. Employees can designate the investment of their 401(k) accounts from among a broad range of mutual funds. We do not allow investment in our common stock through the 401(k) plan.

Limitation of Liability and Indemnification

Our amended and restated certificate of incorporation, which will become effective upon the closing of this offering, limits the personal liability of directors for breach of fiduciary duty to the maximum extent permitted by the Delaware General Corporation Law and provides that no director will have personal liability to us or to our stockholders for monetary damages for breach of fiduciary duty or other duty as a director. However, these provisions do not eliminate or limit the liability of any of our directors:

- for any breach of the director's duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- for voting or assenting to unlawful payments of dividends, stock repurchases or other distributions; or
- for any transaction from which the director derived an improper personal benefit.

Any amendment to or repeal of these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to such amendment or repeal. If the Delaware General Corporation Law is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the Delaware General Corporation Law.

In addition, our amended and restated certificate of incorporation, which will become effective upon the closing of this offering, provides that we are authorized indemnify our directors and officers and we must advance expenses, including attorneys' fees, to our directors and officers in connection with legal proceedings, subject to very limited exceptions.

In addition to the indemnification required in our amended and restated certificate of incorporation and amended and restated bylaws, we expect to enter into indemnification agreements with each of our current directors, officers, and some employees before the completion of this offering. These agreements provide for the indemnification of our directors, officers, and some employees for all reasonable expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were our agents. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors, officers and employees.

We maintain a general liability insurance policy that covers specified liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers. In addition, we have entered into indemnification agreements with all of our directors prior to the closing of this offering. These indemnification agreements may require us, among other things, to indemnify each such director and executive officer for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by him in any action or proceeding arising out of his or her service as one of our directors or executive officers.

Some of our non-employee directors may, through their relationships with their employers, be insured or indemnified against specified liabilities incurred in their capacities as members of our board of directors.

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

Non-Employee Director Compensation

The following table sets forth information regarding the total compensation paid to our current non-employee directors during 2014 for their service on our board of directors. The compensation amounts presented in the table below are historical and are not indicative of the amounts we may pay our directors in the future. Directors who are also our employees receive no additional compensation for their services as directors and are not set forth in the table below. After consultation with Radford, our compensation consultant, our board of directors has approved a compensation policy for our non-employee directors that becomes effective upon the closing of this offering. This policy provides for the following compensation to our non-employee directors following this offering:

- The chair of our board of directors will receive an annual fee from us of $60,000 and each other non-employee director will receive $35,000;
- The chair of our audit committee will receive an annual fee from us of $15,000 and each other members will receive $7,500;
- The chair of our compensation committee will receive an annual fee from us of $10,000 and each other members will receive $5,000;
- The chair of our nominating and corporate governance committee will receive an annual fee from us of $7,000 and each other members will receive $3,500; and
- Each non-employee director will be entitled to an initial grant of options to purchase 16,714 shares of our common stock and an annual grant of options to purchase 8,357 shares of our common stock under our 2015 Plan. The initial grant will vest in three substantially equal annual installments over three years and the annual grant will vest in full or the one year anniversary of the grant date, in each case, subject to continued service from the date of grant until the applicable vesting dates.

All fees under the director compensation policy will be on a rolling annual basis and no per meeting fees will be paid. We will also reimburse non-employee directors for reasonable expenses incurred in connection with attending board of director and committee meetings.

Name	Fees Earned or Paid in Cash	Total ($)
Sol Barer, Ph.D.(1)	$ 49,250	$ 49,250
James Barrett, Ph.D.(2)(5)	—	—
Eugene A. Bauer, M.D.	40,500	40,500
Isaac Blech	44,500	44,500
Luke Evnin, Ph.D.(2)(3)	—	—
John Catsimatidis(4)	—	—
Magnus Persson, M.D., Ph.D.	38,000	38,000
Behshad Sheldon(2)	—	—
Cary W. Sucoff(4)	35,500	35,500
Mayukh Sukhatme M.D.(2)(6)	—	—
Frank Torti, M.D.(2)(5)	—	—

(1) Dr. Barer resigned from our board of directors on April 23, 2015.

(2) Dr. Barrett, Dr. Evnin, Ms. Sheldon, Dr. Sukhatme and Dr. Torti were each appointed to our board of directors on July 11, 2014.

(3) Dr. Evnin resigned from our board of directors on April 22, 2015.

(4) Mr. Catsimatidis and Mr. Sucoff resigned from our board of directors on July 11, 2014.

(5) Dr. Torti and Mr. Barrett resigned from our board of directors on June 26, 2015.

(6) Dr. Sukhatme resigned from our board of directors on August 12, 2015.

Uli Hacksell, Ph.D.

On May 22, 2015, Dr. Hacksell was appointed to serve as the Chairman of our board of directors. In connection with his election to our board of directors, Dr. Hacksell was granted an option under our 2011 Stock Incentive Plan to purchase 11,607 shares of our common stock at an exercise price per share of $6.13. Such option was fully vested on the date of grant. Also in connection with Dr. Hacksell's appointment, Dr. Hacksell became entitled to receive an annual cash retainer of $35,000, paid quarterly in advance. Such retainer will be replaced by the retainer that will otherwise become payable to him under the non-employee director compensation policy to be implemented in connection with this offering.

Non-Employee Director Equity Outstanding at 2014 Fiscal Year End

The following table provides information about outstanding stock options and stock awards held by each of our non-employee directors as of December 31, 2014. All of these options and awards were granted under our 2011 Stock Incentive Plan.

	Option Awards
	Number of Securities Underlying Unexercised Options (#) Exercisable
Sol Barer, Ph.D.(1)	98,214
James Barrett, Ph.D.(2)	—

	Option Awards
	Number of Securities Underlying Unexercised Options (#) Exercisable
Eugene A. Bauer, M.D.	7,142
Isaac Blech	46,428
Luke Evnin, Ph.D(3)	—
Magnus Persson, M.D., Ph.D.	19,047
Behshad Sheldon	—
Mayukh Sukhatme M.D.(4)	—
Frank Torti, M.D.(2)	—

(1) Dr. Barer resigned from our board of directors on April 23, 2015.

(2) Dr. Torti and Mr. Barrett resigned from our board of directors on June 26, 2015.

(3) Dr. Evnin resigned from our board of directors on April 22, 2015.

(4) Dr. Sukhatme resigned from our board of directors on August 12, 2015.

TRANSACTIONS WITH RELATED PERSONS

The following is a description of transactions since January 1, 2012 to which we have been a party, and in which any of our directors, executive officers or beneficial owners of more than 5% of our voting securities, or affiliates or immediate family members of any of our directors, executive officers or beneficial owners of more than 5% of our voting securities, had or will have a direct or indirect material interest. We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that would be paid or received, as applicable, from unrelated third parties.

Convertible Preferred Stock Financings

From July 2014 through September 2014, we entered into a Series B Preferred Stock Purchase Agreement pursuant to which we issued and sold to investors at a purchase price of $0.2999 per share an aggregate of 58,948,735 shares of Series B convertible preferred stock. The aggregate consideration for the Series B convertible preferred stock offering was $15.0 million in cash and $2.3 million in aggregate principal and interest due under convertible promissory notes and demand promissory notes. The following table sets forth the shares of Series B convertible preferred stock issued to our directors, executive officers and holders of more than five percent of our capital stock and their affiliates, and the breakdown of the purchase price paid by such persons:

		Purchase Price for Series B Preferred Stock	
Name	Shares of Series B Convertible Preferred Stock Purchased	Paid in Cash	Financed by Amounts Due under Existing Convertible Notes
Directors:			
Sol Barer, Ph.D.(1)	893,517	—	$ 200,970
5% Stockholders:			
New Enterprise Associates 14, L.P. and affiliates	16,672,224	$ 4,666,667	$ 333,333
Apple Tree Partners IV, LP	16,672,224	$ 4,666,667	$ 333,333
MPM BioVentures V, LP and affiliates	16,672,224	$ 4,667,000	$ 333,000

(1) Dr. Barer resigned from our board of directors on April 23, 2015.

In August 2013, we entered into a Series A-1 Preferred Stock and Warrant Purchase Agreement pursuant to which we issued and sold to investors at a purchase price of $0.75 per unit an aggregate of 9,074,511 shares of Series A-1 convertible preferred stock and warrants to purchase 81,020 shares of our common stock at $28.00 per share which is subject to adjustment as set forth in such warrant. The aggregate consideration for the Series A-1 convertible preferred stock offering was $6.8 million in cash. The following table sets forth the shares of Series A-1 convertible preferred stock and warrants issued

to our directors, executive officers and holders of more than five percent of our capital stock and their affiliates, and the breakdown of the purchase price paid:

Name	Shares of Series A-1 Convertible Preferred Stock Purchased	Shares of Common Stock Issuable Upon Exercise of Warrants	Aggregate Purchase Price
Directors:			
Sol Barer, Ph.D.(1)	53,334	476	$ 40,000

(1) Dr. Barer resigned from our board of directors on April 23, 2015.

From February 2012 through May 2012, we entered into Series A Preferred Stock and Warrant Purchase Agreements pursuant to which we issued and sold to investors at a purchase price of $0.75 per unit an aggregate of 31,116,391 shares of Series A convertible preferred stock and warrants to purchase 277,824 shares of our common stock at $28.00 per share. The aggregate consideration for the Series A convertible preferred stock offering was $20.3 million in cash and $3.1 million in aggregate principal and interest due under a convertible demand promissory note held by an affiliate of Mr. Blech, a member of our board of directors, which pursuant to the terms of such note, was converted into shares of Series A convertible preferred stock. In addition, for any investor of Series A convertible preferred stock who also participated in the Series A-1 convertible preferred stock offering, we amended the terms of the original warrants issued in connection with such Series A convertible preferred stock by reducing the exercise price of the warrants issued from $28.00 per share of common stock to $14.00 per share of common stock provided that such investor purchased a minimum of 40% of their original Series A convertible preferred stock investment. The following table sets forth the shares of Series A convertible preferred stock and warrants issued to our directors, executive officers and holders of more than five percent of our capital stock and their affiliates, and the breakdown of the purchase price paid:

Name	Shares of Series A Convertible Preferred Stock Purchased	Shares of Common Stock Issuable Upon Exercise of Warrants	Aggregate Purchase Price
Directors:			
Sol Barer, Ph.D.(1)	133,333	1,190	$ 100,000
Isaac Blech(2)	4,210,808	37,596	$ 3,158,106
John Catsimatidis(3)	400,000	3,571	$ 300,000

(1) Dr. Barer resigned from our board of directors on April 23, 2015.

(2) These numbers include the (i) 4,077,475 shares of Series A convertible preferred stock held by Daniel Blech Trust DTD 8/3/2005, or the Blech Trust, and (ii) 36,406 common shares issuable upon the exercise of warrants held by the Blech Trust. Mr. Blech has voting control over the shares held by the Blech Trust.

(3) Represents Series A convertible preferred stock and warrants held by United Acquisition Corp., which is indirectly 100% owned and controlled by Mr. Catsimatidis. Mr. Catsimatidis resigned from our board of directors on July 11, 2014.

Loan Transaction

In July 2014, we sold approximately $1.0 million in gross principal amount of convertible demand promissory notes to the Series B convertible preferred stock venture capital investors. The note carried

interest at a rate of 0.31% per annum, compounded annually. In July 2014, pursuant to the terms of the notes, all principal and interest due under the notes was converted into shares of Series B preferred stock. The following table sets forth the amount of notes purchased by our directors, executive officers and holders of more than five percent of our capital stock and their affiliates:

Name	Initial Principal Amount of Note
5% Stockholders:	
New Enterprise Associates 14, L.P. and affiliates	$ 333,333
Apple Tree Partners IV, LP	$ 333,333
MPM BioVentures V, LP and affiliates	$ 333,000

On each of April 29, 2014 and June 9, 2014, we executed a convertible demand promissory note for an aggregate principal amount of $200,000 with Dr. Barer, a former member of our board of directors. The note carried interest at a rate of 6% per annum, compounded annually. On July 11, 2014, the principal outstanding under each convertible demand promissory note, plus all accrued and unpaid interest of $970 in the aggregate, was converted into 893,517 shares of Series B convertible. In connection with issuing the convertible demand promissory notes, Dr. Barer received a warrant to purchase 23,817 shares of our common stock at an exercise price of $8.40 per share.

Offer Letters

We currently have written offer letters with our President and Chief Executive Officer, Dr. Blake Paterson, and our Chief Business Officer, John Kaiser. For more information, refer to the section entitled "Executive Compensation—Offer Letters."

In addition, we have a written offer letter with the chairman of our board of directors, Uli Hacksell, Ph.D., and with our Chief Medical Officer and Head Regulatory Affairs, Ronald Marcus, M.D.

Uli Hacksell, Ph.D.

Dr. Hacksell entered into an offer letter effective May 20, 2015. The offer letter provides for an annual retainer of $35,000 and a grant of a stock option to purchase up to 11,607 shares of our common stock to be issued under our 2011 Stock Incentive Plan. Dr. Hacksell will maintain the confidentiality of all of our confidential information obtained by him as a result of his serving as a director.

Ronald Marcus, M.D.

Dr. Marcus entered into an offer letter effective May 18, 2015. The offer letter provides for an annual base salary of $310,000. Dr. Marcus was entitled to up to $3,000 in relocation expenses and is entitled to up to $2,000 per month for living expenses. The offer letter provides for an initial stock option grant of 55,714 shares of our common stock to be issued under our 2011 Stock Incentive Plan, subject to standard vesting terms so long as Dr. Marcus remains employed by us. In addition, Dr. Marcus is eligible to receive a discretionary annual bonus as determined by our board of directors or the compensation committee of our board of directors, in its sole discretion, provided that Dr. Marcus is employed by the company on the applicable bonus payment date. Such annual discretionary bonus may be paid in the form of cash or equity awards, consistent with bonuses paid to executives of similar grade in similarly situated companies in the biotechnology industry, subject to corporate and individual performance.

Pursuant to the terms of Dr. Marcus's offer letter, if Dr. Marcus's employment is terminated for any reason, then the company will pay Dr. Marcus his base salary and expenses accrued, but unpaid as

of the date of his termination, and any benefits accrued and due under any applicable benefit plans and programs of the company.

If Dr. Marcus's employment is terminated without cause or by Dr. Marcus for good reason, provided he complies with the restrictive covenants set forth in the offer letter and executes and does not revoke a release of claims in favor of the company, Dr. Marcus is entitled to an amount equal to the sum of (i) six months of his then-current base salary and (ii) full vesting of the options granted in accordance with the agreement. In addition, Dr. Marcus is entitled to company-paid COBRA premiums for 12 months or until he is eligible for substantially equal coverage.

The offer letter provides that at all times during Dr. Marcus's employment and thereafter, Dr. Marcus will maintain the confidentiality of all confidential information obtained by him as a result of his employment with the company, assign all inventions and not disparage the company or any of its officers, directors, employees, shareholders or products. In addition, during the term of Dr. Marcus's employment with the company, and for the 12 month period after Dr. Marcus's termination of employment, Dr. Marcus cannot (i) compete against the company, (ii) interfere with the relationships between the company and any of its subsidiaries, affiliates or any of their respective vendors or licensors, or (iii) recruit in any way the employees of the company.

Mariam E. Morris CPA

Mariam Morris entered into an offer letter with the company effective August 24, 2015. Beginning on the effective date, We agreed to pay a base salary at an annual rate of not less than $277,900. The annual base salary may further increase from time to time. In connection with Ms. Morris' commencement of employment, she became entitled to reimbursement of temporary living expenses up to, but not exceeding, $3,000 per month, for up to six months. We will also reimburse moving and related expenses to establish permanent residence in Baltimore, not to exceed $20,000.

Ms. Morris will receive an option to purchase shares of our common stock. The option will be granted according to the guidelines to be set by our compensation committee and the 2015 Omnibus Plan. Beginning in 2016, Ms. Morris will be eligible to participate in the 2015 Omnibus Plan at an annual target set by our board of directors. Ms. Morris is eligible to receive a discretionary annual bonus as determined by our board of directors or our compensation committee, in its sole discretion, provided that Ms. Morris is employed on the date such annual bonus is paid. Such bonus may consist of cash and/or grants of additional equity awards in the company and is intended to be substantially consistent with cash bonuses and equity award bonuses paid to executives of similar grade in similarly situated companies in the biotechnology industry, subject to the operations and financial condition of the company and her level of individual performance. Ms. Morris' cash bonus target for 2015 will be 27.5% of her base salary, prorated based on the actual number of days she was employed during the fiscal year.

Pursuant to the terms of Ms. Morris' offer letter, if Ms. Morris' employment is terminated for any reason, then the company will pay Ms. Morris' her base salary, bonus, and expenses accrued, but unpaid as of the date of her termination, and any benefits accrued and due under any applicable benefit plans and programs of the company.

If Ms. Morris' employment is terminated without cause or by Ms. Morris for good reason, provided she complies with the restrictive covenants set forth in the offer letter and executes and does not revoke a release of claims in favor of the company, Ms. Morris is entitled to an amount equal to the sum of (i) six months of her then current base salary and (ii) full vesting of the options granted in accordance with the agreement. In addition, Ms. Morris is entitled to company paid COBRA premiums for 12 months or until she is eligible for substantially equal coverage.

Stock Options Granted to Executive Officers and Directors

We have granted stock options under our 2011 Stock Incentive Plan and outside of such plan to our executive officers and directors. The table below summarizes the stock option grants made to such persons since January 1, 2012.

Optionee Name	Grant Date	Price Per Share	Shares Issued
Blake M. Paterson, M.D.	5/8/2012	$ 8.68	107,142
Blake M. Paterson, M.D.	7/10/2014	$ 16.80	54,353
Sharon Rowland, Ph.D.	5/8/2012	$ 8.68	3,571
Sharon Rowland, Ph.D.	2/5/2013	$ 8.68	3,571
Sharon Rowland, Ph.D.	7/10/2014	$ 10.08	5,892
Reza Mazhari, Ph.D.	5/8/2012	$ 8.68	7,142
Reza Mazhari, Ph.D.	2/5/2013	$ 8.68	4,821
Reza Mazhari, Ph.D.	7/10/2014	$ 10.08	8,214
Sol J. Barer, Ph.D.	1/10/2012	$ 5.60	85,714
Sol J. Barer, Ph.D.	5/13/2014	$ 10.08	12,500
James Vornov, M.D., Ph. D.	11/9/2012	$ 8.68	14,285
James Vornov, M.D., Ph. D.	7/10/2014	$ 10.08	16,071
John J. Kaiser	11/9/2012	$ 8.68	14,285
John J. Kaiser	8/29/2013	$ 8.96	7,142
John J. Kaiser	7/10/2014	$ 10.08	19,285
Federica F. O'Brien	8/29/2013	$ 8.96	26,785
Federica F. O'Brien	7/10/2014	$ 10.08	7,142
Bernadine H. Fraser, Ph.D.	5/8/2012	$ 8.68	1,785
Bernadine H. Fraser, Ph.D.	11/9/2012	$ 8.68	892
Bernadine H. Fraser, Ph.D.	7/10/2014	$ 10.08	2,678
Isaac Blech	5/8/2012	$ 8.68	53,571
Isaac Blech	5/13/2014	$ 10.08	10,714
Cary W. Sucoff	5/8/2012	$ 8.68	7,142
Cary W. Sucoff	5/13/2014	$ 10.08	7,142
Dr. Eugene Bauer, M.D.	5/13/2014	$ 10.08	7,142
Magnus Persson, M.D., Ph. D.	5/13/2014	$ 10.08	7,142
Magnus Persson, M.D., Ph. D.	7/10/2014	$ 10.08	17,857
Ronald Marcus, M.D.	6/2/2015	$ 6.13	55,714
Uli Hacksell, Ph. D.	6/2/2015	$ 6.13	11,607
			581,301

(1) Dr. Barer resigned from our board of directors on April 23, 2015.

(2) Dr. Rowland resigned as our Vice President of Regulatory Affairs on April 3, 2015.

(3) Dr. Mazhari resigned as our Vice President of Preclinical Development on March 2, 2015.

(4) Dr. Vornov resigned as our Chief Medical Officer on January 9, 2015.

(5) Ms. O'Brien resigned as our Chief Financial Officer on April 23, 2015.

(6) Mr. Sucoff resigned from our board of directors on July 11, 2014.

For further information regarding stock option grants to our executive officers and directors, see the section entitled "Executive Compensation."

In addition, in September 2014, we issued a warrant to purchase 2,380 shares of our common stock to Mr. Sucoff, a former member of our board of directors, at an exercise price of $8.68 per share, in consideration for his past services to the Company.

Registration Rights

We are a party to a Second Amended and Restated Investors' Rights Agreement with the holders of our convertible preferred stock, including some of our 5% stockholders and their affiliates and entities affiliated with our directors. This agreement provides these holders the right, subject to the terms of lock-ups entered into in connection with this offering, following the closing of this offering, to demand that we file a registration statement or to request that their shares be covered by a registration statement that we are otherwise filing. See "Description of Capital Stock—Registration Rights" for additional information regarding these registration rights.

Indemnification Agreements

We intend to enter into indemnification agreements with each of our directors and certain of our executive officers. These agreements will require us to indemnify these individuals and, in certain cases, affiliates of such individuals, to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified.

Policies and Procedures for Related Person Transactions

In connection with this offering, our board of directors plans to adopt a written related person transaction policy to set forth policies and procedures for the review and approval or ratification of related person transactions. Effective upon the closing of this offering, this policy is expected to cover any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we are, were or will be a participant, the amount involved exceeds $120,000, with one of our executive officers, directors, director nominees or 5% stockholders, or their immediate family members, each of whom we refer to as a "related person".

If a related person proposes to enter into such a transaction, arrangement or relationship, which we refer to as a "related person transaction," the related person must report the proposed related person transaction to our audit committee. The policy calls for the proposed related person transaction to be reviewed and, if deemed appropriate, approved by our audit committee. Whenever practicable, the reporting, review and approval will occur prior to entry into the transaction. If advance review and approval is not practicable, the committee will review, and, in its discretion, may ratify the related person transaction.

A related person transaction reviewed under the policy will be considered approved or ratified if it is authorized by the committee after full disclosure of the related person's interest in the transaction. As appropriate for the circumstances, the audit committee will review and consider:

- the interests, direct or indirect, of any related person in the transaction;
- the purpose of the transaction;
- the proposed aggregate value of such transaction, or, in the case of indebtedness, that amount of principal that would be involved;
- the risks, costs and benefits to the company;
- the availability of other sources of comparable products or services;
- management's recommendation with respect to the proposed related person transaction;

- the terms of the transaction;
- the availability of other sources for comparable services or products;
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

Our audit committee will approve only those related person transactions that, in light of known circumstances, are in, or are not inconsistent with, the best interests of the company and its stockholders, as the audit committee determines in the good faith exercise of its discretion.

In addition to the transactions that are excluded by the instructions to the SEC's related person transaction disclosure rule, our board of directors has determined that the following transactions do not create a material direct or indirect interest on behalf of related persons and, therefore, are not related person transactions for purposes of this policy:

- transactions involving compensation for services provided to the company as an employee, consultant or director; and
- a transaction, arrangement or relationship in which a related person's participation is solely due to the related person's position as a director of an entity that is participating in such transaction, arrangement or relationship.

We did not have a written policy regarding the review and approval of related person transactions prior to this offering. Nevertheless, with respect to such transactions, it has been the practice of our board of directors to consider the nature of and business reason for such transactions, how the terms of such transactions compared to those which might be obtained from unaffiliated third parties and whether such transactions were otherwise fair to and in the best interests of the company, or not contrary to, our best interests. In addition, all related person transactions required prior approval, or later ratification, by our board of directors.

PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our common stock as of August 15, 2015 by:

- each of our directors;
- each of our named executive officers;
- all of our directors and executive officers as a group; and
- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock.

The column entitled "Percentage of Shares Beneficially Owned—Before Offering" is based on a total of 4,630,143 shares of our common stock, which includes 649,721 shares of our common stock outstanding as of August 15, 2015 and 3,980,422 shares of our common stock issuable upon the automatic conversion of all outstanding shares of our convertible preferred stock. The column entitled "Percentage of Shares Beneficially Owned—After Offering" also gives effect to the issuance by us of 4,230,769 shares of our common stock in this offering. The percentage ownership information assumes no exercise of the underwriters' over-allotment option to purchase additional shares.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. Shares of our common stock subject to options that are currently exercisable or exercisable within 60 days after August 15, 2015 are considered outstanding and beneficially owned by the person holding the options for the purpose of calculating the percentage ownership of that person but not for the purpose of calculating the percentage ownership of any other person. Except as otherwise noted, the persons and entities in this table have sole voting and investing power with respect to all of the shares of our common stock beneficially owned by them, subject to

applicable community property laws, where applicable. Except as otherwise set forth below, the address of each beneficial owner is c/o Cerecor Inc., 400 E Pratt Street, Suite 606, Baltimore, Maryland 21202.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
5% Stockholders:			
New Enterprise Associates 14, L.P. and affiliates(1) c/o new Enterprise Associates 1954 Greenspring Drive, Suite 600 Timonium, MD 21093	595,435	12.9%	6.7%
Apple Tree Partners IV, L.P.(2) 47 Hulfish Street, Suite 441 Princeton, NJ 08542	595,435	12.9%	6.7%
MPM BioVentures V, L.P. and affiliates(3) 200 Clarendon Street, 54th Floor Boston, MA 02116	595,435	12.9%	6.7%
Directors and Named Executive Officers:			
Blake M. Paterson, M.D.(4)	217,566	4.5%	2.4%
James Vornov, M.D., Ph.D.	—	—	—
John Kaiser(5)	33,569	*	*
Eugene A. Bauer, M.D.(6)	33,927	*	*
Isaac Blech(7)	487,363	10.3%	5.4%
Uli Hacksell, Ph.D.(8)	11,607	*	*
Magnus Persson, M.D., Ph.D.(9)	24,999	*	*
Phil Gutry	—	—	—
Behshad Sheldon	—	—	—
All current executive officers and directors as a group (11 persons)(10)	814,089	16.4%	8.8%

* Less than one percent.

(1) Consists of (a) 594,245 shares of common stock issuable upon the automatic conversion of 16,638,880 shares of Series B convertible preferred stock held by New Enterprise Associates 14, L.P., or NEA 14, and (b) 1,190 shares of common stock issuable upon the automatic conversion of 33,334 shares of Series B convertible preferred stock held by NEA Ventures 2014, L.P., or NEA Ventures. The shares directly held by NEA 14 are indirectly held by NEA Partners 14, Limited Partnership, or NEA Partners 14, the sole general partner of NEA 14, NEA 14 GP, LTD., or, NEA 14 GP, the sole general partner of NEA Partners 14, and each of the individual directors of NEA 14 GP. The individual directors of NEA 14 GP are M. James Barrett, Peter J. Barris, Forest Baskett, Ryan D. Drant, Anthony A. Florence, Jr., Patrick J. Kerins, Krishna "Kittu" Kolluri, David M. Mott, Scott D. Sandell, Peter Sonsini, Ravi Viswanathan and Harry R. Weller. NEA 14, NEA Partners 14, NEA 14 GP and the directors of NEA GP share voting and dispositive power with respect to the shares held by NEA 14. The shares directly held by NEA Ventures are indirectly held by Karen P. Welsh, the general partner of NEA Ventures, who holds voting and dispositive power with respect to the shares held by NEA Ventures. All indirect holders of the above referenced shares disclaim beneficial ownership of all applicable shares except to the extent of their actual pecuniary interest therein, if any.

(2) Consists of 595,435 shares of common stock issuable upon the automatic conversion of 16,672,224 shares of Series B convertible preferred stock held by Apple Tree Partners IV, L.P., or ATP IV. As the sole general partner of ATP IV, ATP III GP, Ltd., or the GP, may be deemed to own beneficially our shares held by ATP IV. As the sole director of the GP, Dr. Seth L. Harrison may be deemed to own beneficially our shares held by ATP IV. Dr. Harrison disclaims beneficial ownership except to the extent of his pecuniary interest in our shares held by ATP IV.

(3) Consists of (a) 573,170 shares of common stock issuable upon the automatic conversion of 16,048,760 shares of Series B convertible preferred stock held by MPM BioVentures V, L.P., or MPM BioVentures V, and (b) 22,266 shares of common stock issuable upon the automatic conversion of 623,464 shares of Series B convertible preferred stock held by MPM Asset Management Investors BV5 LLC, or MPM Asset Management. MPM BioVentures V GP LLC is the general partner of MPM BioVentures V. MPM BioVentures V LLC is the managing member of MPM BioVentures V GP LLC and the manager of Asset Management LLC. The members of MPM BioVentures V LLC are Luke Evnin, Todd Foley, Ansbert Gadicke, Vaughn Kailian and James Scopa. Each member shares voting and dispositive power with respect to the shares held by each of MPM BioVentures V and MPM Asset Management. All indirect holders of the above referenced shares disclaim beneficial ownership of all applicable shares except to the extent of their actual pecuniary interest therein, if any.

(4) Includes 161,495 shares of common stock issuable upon the exercise of options within 60 days of August 15, 2015.

(5) Includes 33,569 shares of common stock issuable upon the exercise of options within 60 days of August 15, 2015.

(6) Includes 7,142 shares of common stock issuable upon the exercise of options within 60 days of August 15, 2015.

(7) Includes (i) 5,952 shares of common stock issuable upon the automatic conversion of 133,333 shares of Series A convertible preferred stock and 182,030 shares of common stock held by Daniel Blech Trust DTD 8/3/2005, or the Blech Trust, issuable upon the automatic conversion of 4,077,475 shares of Series A convertible preferred stock, (ii) 64,285 shares of common stock issuable upon the exercise of stock options within 60 days of August 15, 2015 and (iii) 1,190 shares of common stock issuable upon the exercise of warrants within 60 days of August 15, held by Mr. Blech 2015, and 36,406 shares of common stock issuable upon the exercise of warrants within 60 days of August 15, 2015 held by the Blech Trust. Mr. Blech has voting control over all of the shares held by the Blech Trust and Mr. Blech disclaims beneficial ownership of such shares.

(8) Includes 11,607 shares of our common stock issuable upon the exercise of options within 60 days of August 15, 2015.

(9) Includes 24,999 shares of common stock issuable upon the exercise of options within 60 days of August 15, 2015.

(10) Includes (i) the number of shares beneficially owned by the directors and named executive officers listed in the above table, other than Dr. Vornov, whose employment with the company ended on January 9, 2015, (ii) 5,058 shares of common stock issuable upon the exercise of stock options within 60 days of August 15, 2015 held by Dr. Fraser and (iii) Dr. Marcus and Ms. Morris who currently do not beneficially own any shares of our common stock and do not have the right to acquire beneficial ownership of any shares of our common stock within 60 days of August 15, 2015.

DESCRIPTION OF CAPITAL STOCK

Upon the closing of this offering and the filing of our amended and restated certificate of incorporation, our authorized capital stock will consist of 200,000,000 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 is a summary of the rights of our common and convertible preferred stock and some of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective upon the closing of this offering, and of the Delaware General Corporation Law. This summary is not complete. For more detailed information, please see our amended and restated certificate of incorporation and amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the Delaware General Corporation Law.

Common Stock

On June 30, 2015, there were (i) 649,721 shares of our common stock outstanding, held of record by 24 stockholders, (ii) 510,884 shares of our common stock subject to outstanding options, (iii) 490,756 shares of our common stock issuable upon the exercise of warrants which warrants are expected to remain outstanding upon the closing of this offering, (iv) 166,718 shares of our common stock issuable upon the exercise of warrants outstanding, which warrants will expire upon the closing of this offering in accordance with their terms, unless exercised prior thereto and (v) 22,328 shares of our common stock issuable upon the exercise of the warrant outstanding as of June 30, 2015, which warrant is exercisable to purchase shares of Series B convertible preferred stock prior to the completion of this offering and which warrant is expected to remain outstanding upon the closing of this offering.

Based on (i) 649,721 shares of our common stock outstanding as of June 30, 2015, (ii) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 3,980,422 shares of our common stock upon the closing of this offering, and (iii) the issuance of 4,230,769 shares of common stock in this offering, there will be 8,860,912 shares of our common stock outstanding upon the closing of this offering.

Voting

Our common stock is entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election.

Dividends

Subject to preferences that may be applicable to any then outstanding convertible preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of convertible preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our convertible preferred stock that we may designate and issue in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Preferred Stock

On June 30, 2015, there were 31,116,391 shares of Series A convertible preferred stock outstanding, held of record by 154 stockholders, 9,074,511 shares of Series A-1 convertible preferred stock outstanding, held of record by 146 stockholders, 58,948,735 of Series B convertible preferred stock, held of record by 15 stockholders. Pursuant to the terms of the convertible preferred stock, each share of Series A convertible preferred stock will automatically convert into 0.04464 shares of our common stock immediately prior to the closing of this offering, each share of Series A-1 convertible preferred stock will automatically convert into 0.05357 shares of our common stock immediately prior to the closing of this offering, and each share of Series B convertible preferred stock will automatically convert into 0.03571 share of our common stock immediately prior to the closing of this offering. Accordingly, immediately upon the closing of this offering, the outstanding shares of convertible preferred stock will automatically convert into an aggregate amount of 3,980,422 shares of our common stock. No fractional shares of our common stock will be issued upon the conversion of our preferred stock. In lieu of any fractional shares, we will pay a cash amount to the holder of such fractional share equal to the fair market value of such fractional share as determined by our board of directors.

Following this offering, under our amended and restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to 5,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power, impair the liquidation rights of our common stock or otherwise adversely affect the rights of holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of our common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Options

As of June 30, 2015, options to purchase an aggregate of 510,884 shares of our common stock at a weighted average exercise price of $8.88 per share were outstanding.

Warrants

The following table summarizes the warrants to purchase an aggregate of 657,474 shares of our common stock outstanding as of June 30, 2015:

Number of Warrants	Number of Holders	Per Share Exercise Price	Expiration Date
109,976	43	$ 28.00	February 2017
29,260	36	$ 14.00	February 2017
90,529	45	$ 28.00	March 2017
29,557	33	$ 14.00	March 2017
130,233	2	$ 28.00	April 2017
14,284	3	$ 28.00	July 2017
80,966	149	$ 28.00	August 2018
3,571	1	$ 28.00	December 2018
59,542	3	$ 8.40	April 2019
23,816	3	$ 8.40	May 2019
65,497	3	$ 8.40	June 2019
17,863	1	$ 8.40	July 2019
2,380	1	$ 8.68	May 2022

In addition, as of June 30, 2015, there is one warrant to purchase 625,208 shares of our Series B convertible preferred stock at an exercise price equal to $0.2999 per share that is exercisable for five years following the closing of this offering. This warrant shall become, in accordance with its terms, a warrant to purchase 22,328 shares of common stock at an exercise price of $8.40 per share upon the closing of this offering.

490,756 shares of our common stock issuable upon the exercise of certain of these warrants has a net exercise provision under which its holder may, in lieu of payment of the exercise price in cash, surrender the warrant and receive a net amount of shares based on the fair market value of our common stock at the time of exercise of the warrant after deduction of the aggregate exercise price. Certain of these warrants also contains provisions for the adjustment of the exercise price and the aggregate number of shares issuable upon the exercise of the warrant in the event of stock dividends, stock splits and reclassifications, consolidations or combinations. 166,718 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2015 will expire upon the closing of this offering in accordance with their terms, unless exercised prior thereto. The table set forth above does not include a warrant to purchase 24,306 shares of our common stock, at an exercise price of $21.00 per share, we issued to Maxim Partners LLC, or Maxim, on August 23, 2013. On June 12, 2015, we entered into an agreement with Maxim to terminate the warrant effectively immediately without any consideration due to Maxim.

The holders of certain of these warrants are entitled to registration rights under our Second Amended and Restated Investors' Rights Agreement, as described in more detail under "—Registration Rights."

Registration Rights

Under our Second Amended and Restated Investors' Rights Agreement, upon the closing of this, holders of a total of 5,143,229 shares of our common stock that will be outstanding after this offering, which includes shares of common stock issuable upon exercise of outstanding warrants, will have certain registration rights. The registration rights are described below.

Demand Registration Rights

At any time after 180 days after the closing of this offering, the holders of a majority of the shares then outstanding having demand registration rights may request that we register all or a portion of their shares of common stock for sale under the Securities Act. We will effect the registration as requested so long as the aggregate price to the public, net of expenses, in connection with any such offering is at least $10.0 million unless, in the good faith judgment of our board of directors, such registration would be materially detrimental to the company and its stockholders and should be delayed. We are not obligated to file a registration statement pursuant to this provision on more than two occasions.

In addition, when we are eligible for the use of Form S-3, or any successor form, holders having demand registration rights may make requests that we register all or a portion of their common stock for sale under the Securities Act on Form S-3, or any successor form, so long as the aggregate price to the public, net of expenses, in connection with any such offering is at least $1.0 million unless, in the good faith judgment of our board of directors, such registration would be materially detrimental to the company and its stockholders and should be delayed. We are not obligated to file a Form S-3 pursuant to this provision on more than two occasions in any 12-month period.

Incidental Registration Rights

In addition, if at any time after this offering we register any shares of our common stock for public sale, the holders of all shares having piggyback registration rights are entitled to notice of the registration and to include all or a portion of their shares of common stock in the registration.

Other Provisions

In the event that any registration in which the holders of registrable shares participate pursuant to the Second Amended and Restated Investors' Rights Agreement is an underwritten public offering, the number of registrable shares to be included may, in specified circumstances, be limited due to market conditions.

We will pay all registration expenses, other than underwriting discounts and selling commissions, and the reasonable fees and expenses of a single special counsel for the selling stockholders, related to any demand, piggyback and Form S-3 registration. The Second Amended and Restated Investors' Rights Agreement contains customary cross-indemnification provisions, pursuant to which we must indemnify the selling stockholders in the event of material misstatements or omissions in the registration statement attributable to us, and they must indemnify us for material misstatements or omissions in the registration statement attributable to them. The demand, piggyback and Form S-3 registration rights described above will expire upon the earlier of (i) the later of five years from the closing of this offering and August 23, 2020, (ii) a holder holds less than one percent of all securities subject to registration rights and the holder may sell all registrable securities pursuant to Rule 144 without restrictions during any three-months period or (iii) the closing of a Deemed Liquidation Event, as such term is defined in our amended and restated certificate of incorporation as in effect prior to the closing of this offering.

Anti-Takeover Effects of Delaware Law and Our Charter and Bylaws

Provisions of Delaware law and our certificate of incorporation and by-laws could make it more difficult to acquire us by means of a tender offer, a proxy contest, open market purchases, removal of incumbent directors and otherwise. These provisions, summarized below, are expected to discourage types of coercive takeover practices and inadequate takeover bids and to encourage persons seeking to acquire control of us to first negotiate with us. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire

or restructure us outweigh the disadvantages of discouraging takeover or acquisition proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Anti-Takeover Law

We are subject to Section 203 of the Delaware General Corporation Law, or Section 203. Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- 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 number of shares outstanding (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
- on or subsequent to the date of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least $66^{2}/_{3}\%$ of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

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

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

The existence of this provision generally will have an anti-takeover effect for transactions not approved in advance by the board of directors, including discouraging attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective upon the closing of this offering, may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares or

transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

- permit our board of directors to issue up to 5,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate (including the right to approve an acquisition or other change in our control);
- provide that the authorized number of directors may be changed only by resolution of our board of directors;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner, and also specify requirements as to the form and content of a stockholder's notice;
- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose); and
- provide that special meetings of our stockholders may be called only by the chairman of the board, our chief executive officer or by our board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors.

The amendment of any of these provisions, with the exception of the ability of our board of directors to issue shares of preferred stock and designate any rights, preferences and privileges thereto, would require approval by the holders of at least $66^{2}/_{3}\%$ of our then outstanding common stock.

NASDAQ Capital Market Listing

We have applied to have our common stock listed on the NASDAQ Capital Market under the symbol "CERC."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent and registrar's address is 6201 15^{th} Avenue Brooklyn, NY 11219.

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, including shares issued upon exercise of outstanding options and warrants, or the anticipation of such sales, could adversely affect prevailing market prices of our common stock from time to time and could impair our 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. We plan to apply to have our common stock listed on the NASDAQ Capital Market under the symbol "CERC."

Upon the closing of this offering, we will have outstanding 8,860,912 shares of our common stock, after giving effect to the issuance of 4,230,769 shares of our common stock in this offering and the automatic conversion of all outstanding shares of our convertible preferred stock. The number of shares outstanding upon the closing of this offering assumes no exercise of outstanding options or warrants.

All of the shares sold in this offering will be freely tradable unless purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. The remaining shares of common stock outstanding after this offering will be restricted as a result of securities laws or lock-up agreements as described below. Following the expiration of the lock-up period, all shares will be eligible for resale, subject to compliance with Rule 144 or Rule 701 of the Securities Act, to the extent these shares have been released from any repurchase option that we may hold.

Subject to the lock-up agreements, described in the section entitled "Underwriting—Lock-Up Agreements," 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.

In addition, 2,169,019 shares of common stock that are either subject to outstanding options or warrants or reserved for future issuance under our equity incentive plans will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements or other similar contractual commitments restricting the sale of such shares and Rule 144 and Rule 701 of the Securities Act.

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 shares, or shares if the underwriters exercise their over-allotment option in full, immediately following this offering, based on the number of shares of our common stock outstanding upon the closing of this offering; or

- the average weekly trading volume of our common stock on NASDAQ 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 and other similar contractual restrictions 4,630,143 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

In general, under Rule 701 of the Securities Act, any of an issuer's employees, directors, officers, consultants or advisors who purchases shares from the issuer in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act, is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of the issuer can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of the issuer can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

Lock-up Agreements

As described under the section entitled "Underwriting—Lock-Up Agreements" below, we, each of our directors and officers and substantially all of the holders of at least one-half percent or more of our common stock on a fully diluted basis immediately prior to the consummation of this offering, have agreed, subject to specified exceptions, not to, directly or indirectly, (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of any shares of our common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our common stock or other capital stock or (ii) enter into any swap or other agreement, arrangement, hedge or transaction that transfers to another, in whole or in part, directly or indirectly, any of the economic consequences of ownership of our common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our common stock or other capital stock, without the prior written consent of Maxim Group LLC, for a period of 180 days following the date of this prospectus for the offering.

Holders of our Series A convertible preferred stock, Series A-1 convertible preferred stock and Series B convertible preferred stock are parties to our Second Amended and Restated Investors' Rights Agreement, dated as of July 11, 2014. Pursuant to the terms of this agreement, each holder agreed that they will not engage in the type of transactions set forth above, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to our registration of shares of Common Stock or any other equity securities under the 1933 Act on a registration statement on Form S-1 in connection with an initial public offering, and ending on the date

specified by us and the managing underwriter. Such termination date would not exceed 180 days, or such other period as we may request or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including but not limited to, the restrictions contained in FINRA Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto.

Equity Incentive Plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of our common stock subject to outstanding stock options and common stock issuable under our equity incentive plans. We expect to file the registration statement covering such shares shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market, subject to the expiration of any applicable lock-up period and compliance with the resale provisions of Rule 144. For more information on our equity incentive plans, see "Executive Compensation—Stock Incentive Plans."

Registration Rights

Upon the closing of this offering, holders of a total of 5,143,229 shares of our common stock that will be outstanding after this offering, which includes shares of common stock issuable upon exercise of outstanding warrants, are entitled to demand that we file a registration statement or request that we cover their shares by a registration statement that we otherwise file. For more information, see "Description of Capital Stock—Registration Rights." Except for shares purchased by affiliates, registration of their 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 statement, subject to the expiration of the lock-up period and to the extent these shares have been released from any repurchase option that we may hold.

MATERIAL UNITED STATED FEDERAL INCOME TAX CONSIDERATIONS FOR NON-UNITED STATES HOLDERS OF COMMON STOCK

The following is a general discussion of material United States federal income tax considerations relating to ownership and disposition of our common stock by a non-United States holder. For purposes of this discussion, the term "non-United States holder" means a beneficial owner of our common stock that is not, for United States federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation, or other entity treated as a corporation for United States federal income tax purposes, created or organized in or under the laws of the United States or of any political subdivision of the United States;
- an estate the income of which is subject to United States federal income taxation regardless of its source; or
- a trust, if a United States court is able to exercise primary supervision over the administration of the trust and one or more United States persons have authority to control all substantial decisions of the trust or if the trust has a valid election to be treated as a United States person under applicable United States Treasury regulations.

This discussion is based on current provisions of the United States Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing and proposed United States Treasury regulations promulgated thereunder, current administrative rulings and judicial decisions, all as in effect as of the date of this prospectus and all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any change could alter the tax consequences to non-United States holders described in this prospectus. In addition, the Internal Revenue Service, or the IRS, could challenge one or more of the tax consequences described in this prospectus.

We assume in this discussion that each non-United States holder holds shares of our common stock as a capital asset (generally, property held for investment). This discussion does not address all aspects of United States federal income taxation that may be relevant to a particular non-United States holder in light of that non-United States holder's individual circumstances nor does it address any aspects of United States federal estate or gift taxes, and state, local or non-United States taxes. This discussion also does not consider any specific facts or circumstances that may apply to a non-United States holder and does not address the special tax rules applicable to particular non-United States holders, such as:

- insurance companies;
- tax-exempt organizations;
- financial institutions;
- brokers or dealers in securities;
- regulated investment companies;
- pension plans;
- controlled foreign corporations;
- passive foreign investment companies;
- owners that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or other integrated investment; and
- certain United States expatriates.

In addition, this discussion does not address the tax treatment of partnerships or persons who hold their common stock through partnerships or other entities which are pass-through entities for United States federal income tax purposes. A partner in a partnership or other pass-through entity that will hold our common stock should consult his, her or its own tax advisor regarding the tax consequences of the ownership and disposition of our common stock through a partnership or other pass-through entity, as applicable.

Prospective investors should consult their tax advisors regarding the United States federal, state, local and non-United States income and other tax considerations of acquiring, holding and disposing of our common stock.

Dividends

As described in the section entitled "Dividend Policy," we do not anticipate declaring or paying dividends to holders of our common stock in the foreseeable future. However, if we make distributions of cash or property on our common stock, those distributions generally will constitute dividends for United States federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under United States federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-United States holder's investment, up to such holder's tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below under the heading "Gain on Disposition of Common Stock."

Dividends paid to a non-United States holder generally will be subject to withholding of United States federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

Dividends that are treated as effectively connected with a trade or business conducted by a non-United States holder within the United States, and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-United States holder within the United States, are generally exempt from the 30% withholding tax if the non-United States holder satisfies applicable certification and disclosure requirements by providing a properly executed IRS Form W-8ECI (or successor form). However, such United States effectively connected income, net of specified deductions and credits, is taxed at the regular graduated United States federal income tax rates applicable to United States persons (as defined in the Code). Any United States effectively connected income received by a non-United States holder that is a corporation may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

A non-United States holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN (or successor form) and satisfy applicable certification and other requirements. Non-United States holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

A non-United States holder that is eligible for a reduced rate of United States withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim with the IRS.

Gain on Disposition of Common Stock

A non-United States holder generally will not be subject to United States federal income tax on gain realized on a disposition of our common stock unless:

- the gain is effectively connected with the non-United States holder's conduct of a trade or business in the United States, and, if an applicable income tax treaty so provides, the gain is attributable to a permanent establishment or fixed base maintained by the non-United States holder in the United States; in these cases, the non-United States holder will be taxed on a net income basis at the regular graduated rates and in the manner applicable to United States persons, and, if the non-United States holder is a foreign corporation, an additional branch profits tax at a rate of 30%, or a lower rate as may be specified by an applicable income tax treaty, may also apply;

- the non-United States holder is a non-resident alien present in the United States for 183 days or more in the taxable year of the disposition and certain other requirements are met, in which case the non-United States holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty) on the net gain derived from the disposition, which may be offset by United States-source capital losses of the non-United States holder, if any; or

- we are or have been, at any time during the five-year period preceding such disposition (or the non-United States holder's holding period, if shorter) a "United States real property holding corporation." Generally, a corporation is a "United States real property holding corporation" if the fair market value of its "United States real property interests" equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we believe that we are not currently, and we do not anticipate becoming, a "United States real property holding corporation" for United States federal income tax purposes. Even if we are or were to become a United States real property holding corporation, gains realized by a non-United States holder on a disposition of our common stock will not be subject to United States federal income tax if our common stock is regularly traded on an established securities market and the non-United States holder holds no more than 5% of our outstanding common stock, directly or indirectly, during the shorter of the five-year period ending on the date of the disposition or the non-United States holder's holding period. No assurance can be provided that our common stock will continue to be regularly traded on an established securities market for purposes of the rule described above.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each non-United States holder payments of dividends on our common stock to such holder and the tax withheld, if any, with respect to such dividends. Non-United States holders may have to comply with specific certification procedures to establish that the holder is not a United States person (as defined in the Code) in order to avoid backup withholding at the applicable rate, currently 28%, with respect to dividends on our common stock. Generally, a holder will comply with such procedures if it provides a properly executed IRS Form W-8BEN (or other applicable Form W-8) or otherwise meets documentary evidence requirements for establishing that it is a non-United States holder, or otherwise establishes an exemption. Dividends paid to non-United States holders subject to withholding of United States federal income tax, as described above under "—Dividends," generally will be exempt from United States backup withholding.

Information reporting and backup withholding generally will apply to the proceeds of a disposition of our common stock by a non-United States holder effected by or through the United States office of any broker, United States or foreign, unless the holder certifies its status as a non-United States holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information

reporting and backup withholding will not apply to a payment of disposition proceeds to a non-United States holder where the transaction is effected outside the United States through a non-United States office of a broker. However, for information reporting purposes, dispositions effected through a non-United States office of a broker with substantial United States ownership or operations generally will be treated in a manner similar to dispositions effected through a United States office of a broker. Non-United States holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the non-United States holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-United States holder can be refunded or credited against the non-United States holder's United States federal income tax liability, if any, provided that an appropriate claim is timely filed with the IRS.

Recently-Enacted Legislation Relating to Foreign Accounts

Legislation enacted in March 2010, commonly referred to as FATCA, generally will impose a 30% withholding tax on dividends of, and gross proceeds from the sale or disposition, of our common stock if paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (i) the foreign financial institution undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) the non-financial foreign entity identifies its "substantial United States owner" (as defined in the Code) or certifies that it does not have any substantial United States owner, or (iii) the foreign financial institution or non-financial foreign entity is otherwise exempt under FATCA.

Pursuant to final regulations issued by the United States Department of Treasury and recently issued guidance, withholding under FATCA will only apply (i) to payments of dividends on our common stock made after June 30, 2014 and (ii) to payments of gross proceeds from a sale or other disposition of our common stock made after December 31, 2016. Under certain circumstances, a non-United States holder may be eligible for refunds or credits of the tax. Non-United States holders should consult their tax advisors regarding the possible implications of FATCA on their investment in our common stock.

The preceding discussion of material United States federal tax considerations is for general information only. It is not tax advice. Prospective investors should consult their tax advisors regarding the particular United States federal, state, local and non-United States tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed changes in applicable laws.

UNDERWRITING

As of the date of this prospectus, we have entered into an underwriting agreement with Maxim Group LLC, or Maxim, acting as sole book running manager and representative for the underwriters named below. Subject to the terms and conditions of the underwriting agreement, the underwriters named below have agreed to purchase, and we have agreed to sell to them, the number of shares of our common stock at the initial public offering price, less the underwriting discounts and commissions, as set forth on the cover page of this prospectus:

Underwriter	Number of Shares
Maxim Group LLC	—
Laidlaw & Company (UK) Ltd.	—
Total	4,230,769

All of the shares to be purchased by the underwriters will be purchased from us.

The underwriting agreement provides that the obligations of the underwriters to pay for and accept delivery of the shares of common stock offered by us in this prospectus are subject to various conditions, including the approval of certain legal matters by their counsel. The shares of common stock are offered by the underwriters, subject to prior sale, when, as and if issued to and accepted by them. The underwriters reserve the right to withdraw, cancel or modify the offer and to reject orders in whole or in part.

The underwriting agreement provides that the underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken, other than those shares covered by the over-allotment option described below. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

Over-Allotment Option

We have granted an option to the underwriters to purchase up to 15% of the total number of shares of common stock at the initial public offering price per share, less the underwriting discount, set forth on the cover page of this prospectus. This option is exercisable during the 45-day period after the date of this prospectus. The underwriters may exercise this option only to cover over-allotments made in connection with this offering. If the underwriters exercise this option in whole or in part, then the underwriters will be severally committed, subject to the conditions described in the underwriting agreement, to purchase the additional shares of our common stock in proportion to their respective commitments set forth in the prior table.

Discounts and Commissions

The representative has advised us that the underwriters propose to offer the shares of common stock to the public at the initial public offering price per share set forth on the cover page of this prospectus. The underwriters may offer shares to securities dealers at that price less a concession of not more than $ per share, of which up to $ per share may be reallowed to other dealers. After the initial offering to the public, the public offering price and other selling terms may be changed by the representative.

The following table summarizes the underwriting discounts and commissions and proceeds, before expenses, to us assuming both no exercise and full exercise by the underwriters of their over-allotment option:

		Total	
	Per Share	Without Option	With Option
Public offering price	$	$	$
Underwriting discounts and commissions(1)	$	$	$
Proceeds, before expenses, to us	$	$	$

(1) The underwriting discounts and commissions do not include the Underwriters' Warrants or expense reimbursement as described below.

We estimate the expenses of this offering payable by us, not including underwriting discounts and commissions, will be approximately $2.5 million. We have agreed to pay the underwriters a non-accountable expense allowance in an amount of 1.5% of the gross proceeds of this offering, for certain of their expenses incurred in connection with this offering, such as background check fees, cost for book building, prospectus tracking and compliance software and road show expenses, but excluding any legal fees. In addition, we have agreed to reimburse the underwriters for its legal fees incurred in connection with this offering in an amount up to $100,000.

Underwriters' Warrants

Upon the closing of this offering, we have agreed to issue to the underwriters warrants to purchase a number of shares of our common stock equal to 2% of the total shares of our common stock sold in this initial public offering, excluding any shares that may be sold pursuant to the underwriter's exercise of the over-allotment option, or Underwriters' Warrants. The Underwriters' Warrants will be exercisable at a per share exercise price equal to 150% of the initial public offering price, and may be exercised on a cashless basis. The Underwriters' Warrants are exercisable commencing on the effective date of the registration statement related to this offering, and will be exercisable for five years. The Underwriters' Warrants are not redeemable by us. The Underwriters' Warrants, collectively, also provide for (i) one demand registration of the shares of common stock underlying the Underwriters' Warrants at our expense, (ii) one demand registration of shares of common stock underlying the Underwriters' Warrants at the warrant holders' expense, and (iii) unlimited "piggyback" registration rights with respect to the registration of the shares of common stock underlying the Underwriters' Warrants at our expense, during the five year period commencing upon the effective date of the registration statement related to this offering.

The Underwriters' Warrants and the shares of common stock underlying the Underwriters' Warrants have been deemed compensation by the Financial Industry Regulatory Authority, or FINRA, and are therefore subject to a 180-day lock-up pursuant to Rule 5110(g)(1) of FINRA. The underwriters, or permitted assignees under such rule, may not sell, transfer, assign, pledge, or hypothecate the Underwriters' Warrants or the securities underlying the Underwriters' Warrants, nor will the underwriters, or permitted assignees engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the Underwriters' Warrants or the underlying shares of common stock for a period of 180 days from the effective date of the registration statement, except that they may be transferred, in whole or in part, by operation of law or by reason of our reorganization, or to any underwriter and selected dealer participating in the offering and their officers or partners if the Underwriters' Warrants or the underlying shares of common stock so transferred remain subject to the foregoing lock-up restrictions for the remainder of the time period. The Underwriters' Warrants will provide for adjustment in the number and price of the Underwriters' Warrants and the shares of common stock underlying such Underwriters' Warrants in the event of

recapitalization, merger, stock split or other structural transaction, or a future financing undertaken by us.

Lock Up Agreements

We, each of our directors and officers and substantially all of the holders of at least one-half percent or more of our common stock on a fully diluted basis immediately prior to the consummation of this offering have agreed or are otherwise contractually restricted for a period of 180 days after the date of this prospectus, without the prior written consent of Maxim, not to directly or indirectly:

- issue (in the case of us), offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of any shares of our common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our common stock or other capital stock;

- in the case of us, file or cause the filing of any registration statement under the Securities Act with respect to any shares of our common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our common stock or other capital stock, other than registration statements on Form S-8 filed with the SEC after the closing date of this offering; or

- enter into any swap or other agreement, arrangement, hedge or transaction that transfers to another, in whole or in part, directly or indirectly, any of the economic consequences of ownership of our common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our common stock or other capital stock,

whether any transaction described in any of the foregoing bullet points is to be settled by delivery of our common stock or other capital stock, other securities, in cash or otherwise, or publicly announce an intention to do any of the foregoing.

There are no existing agreements between the underwriters and any person who will execute a lock-up agreement in connection with this offering providing consent to the sale of shares prior to the expiration of the lock-up period. The lock up does not apply to the issuance of shares upon the exercise of rights to acquire shares of common stock pursuant to any existing stock option or the conversion of any of our preferred convertible stock.

Holders of our Series A convertible preferred stock, Series A-1 convertible preferred stock and Series B convertible preferred stock are parties to our Second Amended and Restated Investors' Rights Agreement, dated as of July 11, 2014. Pursuant to the terms of this agreement, each holder agreed that they will not engage in the type of transactions set forth above, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to our registration of shares of Common Stock or any other equity securities under the 1933 Act on a registration statement on Form S-1 in connection with an initial public offering, and ending on the date specified by us and the managing underwriter. Such termination date would not exceed 180 days, or such other period as we may request or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including but not limited to, the restrictions contained in FINRA Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto.

Indemnification of Underwriters

The underwriting agreement provides that we will indemnify the underwriters against certain liabilities that may be incurred in connection with this offering, including liabilities under the Securities

Act of 1933, or to contribute payments that the underwriters may be required to make in respect thereof.

Stabilization

In connection with this offering, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock. Specifically, the underwriters may over-allot in connection with this offering by selling more shares than they are obligated to purchase under the underwriting agreement, creating a short position in our common stock. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriter is not greater than the number of shares that it may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. To close out a short position or to stabilize the price of our common stock, the underwriters may bid for, and purchase, common stock in the open market. The underwriters may also elect to reduce any short position by exercising all or part of the over-allotment option. In determining the source of common stock to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which it may purchase shares through the over-allotment option. If the underwriters sell more shares than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter or dealer repays selling concessions allowed to it for distributing our common stock in this offering because the underwriter repurchases that stock in stabilizing or short covering transactions.

Finally, the underwriters may bid for, and purchase, shares of our common stock in market making transactions, including "passive" market making transactions as described below.

The foregoing transaction may stabilize or maintain the market price of our common stock at a price that is higher than the price that might otherwise exist in the absence of these activities. The underwriters are not required to engage in these activities, and may discontinue any of these activities at any time without notice. These transactions may be effected on the NASDAQ Capital Market or otherwise.

In connection with this offering, the underwriters and selling group members, if any, or their affiliates may engage in passive market making transactions in our common stock on the NASDAQ Capital Market immediately prior to the commencement of sales in this offering, in accordance with Rule 103 of Regulation M under the Exchange Act of 1934. Rule 103 generally provides that:

- a passive market maker may not effect transactions or display bids for our common stock in excess of the highest independent bid price by persons who are not passive market makers;
- net purchases by a passive market maker on each day are generally limited to 30% of the passive market maker's average daily trading volume in our common stock during a specified two-month prior period or 200 shares, whichever is greater, and must be discontinued when that limit is reached; and
- passive market making bids must be identified as such.

Passive market making may stabilize or maintain the market price of our common stock at a level above that which might otherwise prevail and, if commenced, may be discontinued at any time.

Right of First Refusal

Starting on the date of the commencement of sales of shares of our common stock pursuant to this offering and for a period of 15 months thereafter, we have granted Maxim a right of first refusal on any transaction where we have elected to employ an investment banker to act as lead managing underwriter and sole book runner, with at least 75% of the economics for any and all future public and private equity and debt offerings (excluding commercial bank debt), during such 15-month period, in which we, any successor to us or any of our subsidiaries engage. The 15-month right of first refusal period shall not be extended without our prior written consent, and if extended, shall not have a duration of more than three years from the date of the commencement of sales of shares of our common stock pursuant to this offering.

Discretionary Accounts

The underwriters have informed us that they do not intend to confirm sales to accounts over which they exercise discretionary authority in excess of five percent of the total number of shares of common stock offered by them.

Pricing of this Offering

Prior to this offering, there has been no public market for our common stock. Consequently, the initial public offering price for our common stock was determined between us and the representatives of the underwriters. The factors considered in determining the initial public offering price included:

- prevailing market conditions;
- our results of operations and financial condition;
- financial and operating information and market valuations with respect to other companies that we and the representatives of the underwriters believe to be comparable or similar to us;
- the present state of our development; and
- our future prospects.

An active trading market for our common stock may not develop. It is possible that the market price of our common stock after this offering will be less than the initial public offering price.

NASDAQ Capital Market Listing

We have applied to have our common stock listed on the NASDAQ Capital Market under the symbol "CERC."

LEGAL MATTERS

The validity of the shares of common stock offered hereby is being passed upon for us by Morgan, Lewis & Bockius LLP, Philadelphia, Pennsylvania. The underwriters are being represented by Loeb & Loeb LLP, New York, New York.

EXPERTS

The financial statements of Cerecor Inc. at December 31, 2013 and 2014, and for each of the two years in the period ended December 31, 2014, appearing in this Prospectus and Registration Statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the financial statements) appearing elsewhere herein, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street NE, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities. You may also request a copy of these filings, at no cost, by writing us at 400 E Pratt Street, Suite 606, Baltimore, Maryland 21202 or telephoning us at (410) 522-8707.

Upon the closing of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and web site of the SEC referred to above. We also maintain a website at www.cerecor.com, at which, following the closing of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website incorporated by reference in, and is not part of, this prospectus.

CERECOR, INC.

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Cerecor Inc.

We have audited the accompanying balance sheets of Cerecor Inc. as of December 31, 2013 and 2014, and the related statements of operations, convertible preferred stock and stockholders' deficit and cash flows for each of the two years in the period ended December 31, 2014. These financial statements are the responsibility of the Company's management. 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. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits 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, and 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 Cerecor Inc. at December 31, 2013 and 2014, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2014, in conformity with U.S. generally accepted accounting principles.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has recurring losses from operations, negative cash flows from operations and has a net capital deficiency that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Ernst & Young LLP

Baltimore, Maryland

April 29, 2015, except for the third and fourth paragraph of Note 14 as to which the date is September 4, 2015

CERECOR INC.

Balance Sheets

	December 31, 2013	December 31, 2014
Assets		
Current assets:		
Cash and cash equivalents	$ 3,421,480	$ 11,742,349
Prepaid expenses and other current assets	714,280	360,307
Restricted cash—current portion	—	58,333
Total current assets	4,135,760	12,160,989
Restricted cash, net of current portion	175,000	117,165
Deferred financing costs	698,853	—
Property and equipment, net	65,987	38,740
Total assets	$ 5,075,600	$ 12,316,894
Liabilities, convertible preferred stock and stockholders' deficit		
Current liabilities:		
Current portion of long term debt, net of discount	$ —	$ 1,905,879
Accounts payable	1,639,505	931,139
Accrued expenses and other current liabilities	994,555	975,114
Warrant liability	431,582	69,684
Investor rights obligation	—	1,112,000
Total current liabilities	3,065,642	4,993,816
Long term debt, net of current portion and discount	—	5,308,211
Total liabilities	3,065,642	10,302,027
Convertible preferred stock:		
Series A—$0.001 par value; 31,500,000 and 31,116,391 shares authorized at December 31, 2013 and 2014, respectively; 31,116,391 shares issued and outstanding at December 31, 2013 and 2014, respectively (aggregate liquidation preference of $23,337,293 at December 31, 2014)	19,856,632	10,462,885
Series A-1—$0.001 par value; 20,000,000 and 9,074,511 shares authorized at December 31, 2013 and 2014, respectively, 9,074,511 shares issued and outstanding at December 31, 2013 and 2014, respectively (aggregate liquidation preference of $6,805,883 at December 31, 2014)	1	3,389,331

See accompanying notes to financial statements.

CERECOR INC.

Balance Sheets (Continued)

	December 31, 2013	December 31, 2014
Series B—$0.001 par value; 0 and 115,000,000 shares authorized at December 31, 2013 and 2014, respectively, 0 and 58,948,735 shares issued and outstanding at December 31, 2013 and 2014, respectively (aggregate liquidation preference of $17,678,726 at December 31, 2014)	—	14,493,315
Total convertible preferred stock	19,856,633	28,345,531
Stockholders' deficit:		
Common Stock—$0.001 par value, 167,000,000 and 230,000,000 shares authorized at December 31, 2013 and 2014, respectively, 642,844 and 649,721 shares issued and outstanding at December 31, 2013 and 2014, respectively	643	650
Additional paid-in capital	9,170,468	16,742,063
Accumulated deficit	(27,017,786)	(43,073,377)
Total stockholders' deficit	(17,846,675)	(26,330,664)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 5,075,600	$ 12,316,894

See accompanying notes to financial statements.

CERECOR INC.

Statements of Operations

	Years Ended December 31,	
	2013	2014
Operating expenses:		
Research and development	$ 8,914,084	$ 12,240,535
General and administrative	4,020,364	4,875,030
Total operating expenses	12,934,448	17,115,565
Loss from operations	(12,934,448)	(17,115,565)
Other income (expense):		
Change in fair value of warrant liabilities and Investor Rights Obligation	(121,115)	2,266,161
Interest income (expense), net	10,555	(1,206,187)
Total other income (expense)	(110,560)	1,059,974
Net loss	$ (13,045,008)	$ (16,055,591)
Net loss attributable to common stockholders	$ (13,126,972)	$ (3,521,153)
Net loss per share of Common Stock, basic and diluted	$ (20.72)	$ (5.48)
Weighted-average shares of Common Stock outstanding, basic and diluted	633,669	642,052
Pro forma net loss per share of Common Stock—basic and diluted (unaudited)		$ (1.01)
Pro forma weighted-average shares of Common Stock outstanding, basic and diluted (unaudited)		3,501,768

See accompanying notes to financial statements.

CERECOR INC.

Statements of Convertible Preferred Stock and Stockholders' Deficit

For the Period from January 1, 2013 to December 31, 2014

	Series A, A-1 and B Convertible Preferred Stock		Stockholders' Deficit				
			Common stock		Additional paid-in capital	Accumulated deficit	Total stockholders' deficit
	Shares	Amount	Shares	Amount			
Balance, January 1, 2013	**31,116,391**	**$ 19,856,632**	**642,844**	**$ 643**	**$ 2,591,397**	**$ (13,972,778)**	**$ (11,380,738)**
Issuance of Series A-1 Convertible Preferred Stock	9,074,511	6,567,064	—	—	—	—	—
Discount for beneficial conversion feature on A-1 Convertible Preferred Stock	—	(6,567,064)	—	—	6,567,064	—	6,567,064
Offering costs paid for A-1 Convertible Preferred Stock issuance	—	—	—	—	(736,640)	—	(736,640)
Accretion of A-1 Convertible Preferred Stock beneficial conversion feature discount	—	1	—	—	(1)	—	(1)
Stock-based compensation	—	—	—	—	748,648	—	748,648
Net Loss	—	—	—	—	—	(13,045,008)	(13,045,008)
Balance, December 31, 2013	40,190,902	19,856,633	642,844	643	9,170,468	(27,017,786)	(17,846,675)
Extinguishment upon Modification of Series A and A-1 Convertible Preferred Stock and issuance of common stock dividends	—	(6,004,417)	6,877	7	6,004,604	—	6,004,611
Reclassification of common stock warrants from liabilities to equity	—	—	—	—	426,303	—	426,303
Conversion of Convertible Promissory Notes in Exchange for Series B Convertible Preferred Stock	5,597,618	1,405,003	—	—	—	—	—
Conversion of Demand Notes in Exchange for Series B Convertible Preferred Stock, net of Investors Rights Obligation	3,333,331	837,313	—	—	—	—	—
Issuance of Series B Convertible Preferred Stock net of issuance costs and Investors Rights Obligation	50,017,786	12,250,999			54,107	—	54,107
Stock-based compensation	—	—	—	—	1,086,581	—	1,086,581
Net Loss	—	—	—	—	—	(16,055,591)	(16,055,591)
Balance, December 31, 2014	99,139,637	$ 28,345,531	649,721	$ 650	$ 16,742,063	$ (43,073,377)	$ (26,330,664)

See accompanying notes to financial statements.

CERECOR INC.

Statements of Cash Flows

	Year Ended December 31,	
	2013	2014
Operating activities		
Net loss	$(13,045,008)	$(16,055,591)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	20,032	28,943
Loss on disposition of assets	—	17,806
Stock-based compensation expense	748,648	1,086,581
Write off of deferred public offering costs	—	1,064,106
Non-cash interest expense	—	989,258
Non-cash expense related to issuance of warrants	25,811	—
Change in fair value of warrant liabilities and Investor Rights Obligation	121,115	(2,266,161)
Changes in assets and liabilities:		
Prepaid expenses and other assets	(271,004)	353,973
Restricted cash	(175,000)	(498)
Accounts payable	818,391	(708,366)
Accrued expenses and other current liabilities	271,875	(28,400)
Net cash used in operating activities	(11,485,140)	(15,518,349)
Investing activities		
Purchase of property and equipment	(29,268)	(19,502)
Net cash used in investing activities	(29,268)	(19,502)
Financing activities		
Proceeds from issuance of convertible promissory notes and demand notes	—	2,249,666
Proceeds from issuance of term loan, net of costs	—	7,390,000
Proceeds from issuance of Series A-1 Convertible Preferred Stock, and Common Stock warrants, net of offering costs	6,115,080	—
Deferred financing costs	(698,853)	(365,253)
Proceeds from issuance of Series B Convertible Preferred Stock and Common Stock warrants, net of offering costs	—	14,584,307
Net cash provided by financing activities	5,416,227	23,858,720
Increase (decrease) in cash and cash equivalents	(6,098,181)	8,320,869
Cash and cash equivalents at beginning of period	9,519,661	3,421,480
Cash and cash equivalents at end of period	$ 3,421,480	$ 11,742,349
Supplemental disclosures of cash flow information		
Cash paid for interest	$ —	$ 173,514
Supplemental disclosures of noncash financing activities:		
Conversion of promissory and demand notes into Series B Convertible Preferred Stock	$ —	$ 2,249,666
Reclassification of Common Stock warrants from liabilities to equity	$ —	$ 426,303
Allocation of debt and equity proceeds to Investor Rights Obligation	$ —	$ 2,598,510
Extinguishment upon modification of Series A and A-1 Convertible Preferred Stock	$ —	$ 12,534,438

See accompanying notes to financial statements.

CERECOR INC.

Notes to Financial Statements

As of and for the Years Ended December 31, 2014 and 2013

1. BUSINESS

Description of Business and Organization

Cerecor Inc. (the "Company" or "Cerecor") was incorporated on January 31, 2011 in Delaware as Ceregen Corporation and subsequently changed the name to Cerecor Inc. in March 2011. The Company is a clinical-stage biopharmaceutical company with the goal of becoming a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders. The Company's operations since inception have been limited to organizing and staffing the Company, acquiring rights to and developing certain product candidates and its product platform, business planning and raising capital.

Liquidity

The Company's financial statements have been prepared on a going-concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. Accordingly, the financial statements do not include any adjustments that might be necessary should the Company be unable to continue to fund its operations. The Company has not generated any product revenues and has not yet achieved profitable operations. There is no assurance that profitable operations will ever be achieved, and if achieved, could be sustained on a continuing basis.

The Company has incurred recurring operating losses since inception. For the year ended December 31, 2014, the Company incurred a net loss of $16,055,591 and generated negative cash flows from operations of $15,518,349. As of December 31, 2014, the Company had an accumulated deficit of $43,073,377. The Company has not generated any product revenue to date. The Company anticipates operating losses to continue for the foreseeable future due to, among other things, costs related to the clinical development of its product candidates, its product platform, its preclinical programs, business development and the development of its administrative organization. The Company will require substantial additional financing to fund its operations and to continue to execute its strategy. To fully execute its business plan, the Company will need to complete certain research and development activities, have positive clinical trial results and obtain marketing approval for its product candidates, which may span many years, and may ultimately be unsuccessful. Any delays in completing these activities or negative clinical trial results could adversely impact the Company. The Company plans to meet its capital requirements primarily through a combination of equity and debt financings, collaborations, strategic alliances and marketing distribution or licensing arrangements and in the longer term, revenue from product sales to the extent its product candidates receive marketing approval and are commercialized. There can be no assurance, however, that the Company will be successful in obtaining financing at the level needed to sustain operations and develop its product candidates or on terms acceptable to the Company, or that the Company will obtain approvals necessary to market its products or achieve profitability or sustainable, positive cash flow. The Company currently anticipates that its cash and cash equivalents will be sufficient to meet its anticipated cash requirements through at least the end of the third quarter of 2015. These factors raise significant doubt about the Company's ability to continue as a going concern.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

2. SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The accompanying financial statements have been prepared in conformity with U. S. generally accepted accounting principles ("GAAP"). Any reference in these notes to applicable guidance is meant to refer to the authoritative GAAP as found in the Accounting Standards Codification ("ASC") and Accounting Standards Update ("ASU") of the Financial Accounting Standards Board ("FASB").

Unaudited Pro Forma Presentation

On December 17, 2013, the Company's board of directors authorized management of the Company to confidentially submit a registration statement to the Securities and Exchange Commission (the "SEC") for the Company to sell shares of its Common Stock (the "Common Stock") to the public. The unaudited pro forma net loss per share is computed using the weighted-average number of shares of Common Stock outstanding and gives effect to the automatic conversion of all outstanding shares of the Company's Preferred Stock into an aggregate of 3,980,422 shares of the Company's Common Stock as of January 1, 2014 or the date of original issuance, if later.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses, other comprehensive income and related disclosures. On an ongoing basis, management evaluates its estimates, including estimates related to clinical trial accruals, Investor Rights Obligation, and warrant liability. The Company bases its estimates on historical experience and other market-specific or other relevant assumptions that it believes to be reasonable under the circumstances. Actual results may differ from those estimates or assumptions.

In addition, the Company utilizes estimates and assumptions in determining the fair value of its Common Stock. The Company granted stock options at exercise prices not less than the fair value of its Common Stock as determined by the board of directors, with input from management. Management uses the assistance of a third-party valuation firm in estimating the fair value of the Common Stock. The board of directors has determined the estimated fair value of the Common Stock based on a number of objective and subjective factors, including external market conditions affecting the biotechnology industry sector and the historic prices at which the Company sold shares of its Preferred Stock.

Net Loss Per Share, Basic and Diluted

Basic net loss per share of Common Stock is computed by dividing net loss attributable to common stockholders by the weighted-average number of shares of Common Stock outstanding during the period, excluding the dilutive effects of Preferred Stock, Investor Rights Obligation (see Note 10), warrants on Preferred Stock and Common Stock, stock options, Common Stock dividends on Series A-1 Convertible Preferred Stock and unvested restricted stock. Diluted net loss per share of Common Stock is computed by dividing the net loss attributable to common stockholders by the sum of the weighted-average number of shares of Common Stock outstanding during the period plus the potential dilutive effects of Preferred Stock, Investor Rights Obligation, warrants on Preferred Stock

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

and Common Stock, stock options, Common Stock dividends on Series A-1 Convertible Preferred Stock and unvested restricted stock outstanding during the period calculated in accordance with the treasury stock method, although these shares and options are excluded if their effect is anti-dilutive. In addition, the Company analyzes the potential dilutive effect of the outstanding Preferred Stock, Investor Rights Obligation, and warrants on Preferred Stock and Common Stock under the "if-converted" method when calculating diluted earnings per share, in which it is assumed that the outstanding security converts into Common Stock at the beginning of the period. Because the impact of these items is anti-dilutive during periods of net loss, there was no difference between basic and diluted net loss per share of Common Stock for the years ended December 31, 2013 and 2014.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents. The carrying amounts reported in the balance sheets for cash and cash equivalents are valued at cost, which approximates their fair value.

Restricted Cash

During the third quarter of 2013, the Company entered into a lease for new office space for its principal offices in Baltimore, Maryland. The Company has provided the landlord with a Letter of Credit in the amount of $175,000 as security by the Company of the Company's obligations under the Lease. The Letter of Credit is supported by funds that are invested in a certificate of deposit. Provided there has been no event of default by the Company, the Company may request that the amount of the Letter of Credit be reduced by one-third (approximately $58,000) at the end of each of the first three years of the lease term. At the expiration of the third year of the lease term, the Company shall deposit with Landlord the sum of $13,000 as a security deposit.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk are primarily cash and cash equivalents. The Company maintains a portion of its cash and cash equivalent balances in the form of a money market account with a financial institution that management believes to be creditworthy. The Company has no financial instruments with off-balance sheet risk of loss.

Deferred Offering Costs

The Company capitalizes certain legal, accounting and other third-party fees that are directly associated with in-process equity financings as deferred offering costs (non-current) until such financings are consummated. After consummation of the equity financing, these costs are recorded in stockholders' equity (deficit) as a reduction of additional paid-in capital generated as a result of the offering. Should the equity financing for which those costs relate no longer be considered probable of being consummated, all deferred offering costs will be charged to operating expenses in the statement of operations at such time. The Company incurred and deferred offering costs of $698,853 during the year ended December 31, 2013. These costs were expensed in their entirety during 2014 upon the Company's determination that the equity financing was no longer probable of being consummated.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Prior to this determination, the Company incurred and expensed an additional $365,253 in offering costs during the year ended December 31, 2014.

Debt Issuance Costs

The Company may record debt and equity discounts in connection with raising funds through the issuance of convertible notes or equity instruments. These discounts may arise from (i) the receipt of proceeds less than the face value of the convertible notes or equity instruments, (ii) allocation of proceeds to beneficial conversion features and/or (iii) recording derivative liabilities related to embedded features. These costs are amortized over the life of the debt to interest expense utilizing the effective interest method. If a repayment, extinguishment or conversion of the underlying debt occurs, a proportionate share of the unamortized discount is immediately expensed.

Property and Equipment

Property and equipment consists of computers, office and laboratory equipment, and furniture and is recorded at cost. Maintenance and repairs that do not improve or extend the lives of the respective assets are expensed to operations as incurred. Property and equipment are depreciated on a straight-line basis over their estimated useful lives. The Company uses a life of four years for computers and software, and five years for equipment and furniture. Upon retirement or sale, the cost of the disposed asset and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is recognized.

Impairment of Long-Lived Assets

Long-lived assets consist of property and equipment. Long-lived assets to be held and used are tested for recoverability whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Factors that the Company considers in deciding when to perform an impairment review include significant underperformance of the business in relation to expectations, significant negative industry or economic trends and significant changes or planned changes in the use of the assets. If an impairment review is performed to evaluate a long-lived asset or asset group for recoverability, the Company compares forecasts of undiscounted cash flows expected to result from the use and eventual disposition of the long-lived asset or asset group to its carrying value. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use and eventual disposition of an asset or asset group are less than its carrying amount. The impairment loss would be based on the excess of the carrying value of the impaired asset or asset group over its fair value, determined based on discounted cash flows. To date, the Company has not recorded any impairment losses on long-lived assets.

Research and Development

Research and development costs are expensed as incurred. These costs include, but are not limited to, employee-related expenses, including salaries, benefits and stock-based compensation of our research and development personnel; expenses incurred under agreements with contract research organizations and investigative sites that conduct clinical trials and preclinical studies; the cost of acquiring, developing and manufacturing clinical trial materials; other supplies; facilities, depreciation

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

and other expenses, which include direct and allocated expenses for rent, utilities and insurance; and costs associated with preclinical activities and regulatory operations.

Costs for certain development activities, such as clinical trials, are recognized based on an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations, or information provided to the Company by its vendors, such as clinical research organizations, with respect to their actual costs incurred. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected in the financial statements as prepaid or accrued research and development expense, as the case may be.

Comprehensive Loss

Comprehensive loss is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. Comprehensive loss was equal to net loss for all periods presented.

Income Taxes

The Company accounts for income taxes under the asset and liability method in accordance with ASC 740, *Income Taxes* ("ASC 740"). Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. The deferred tax asset primarily includes net operating loss and tax credit carryforwards, accrued expenses not currently deductible and the cumulative temporary differences related to certain research and patent costs, which have been charged to expense in the accompanying statements of operations but have been recorded as assets for income tax purposes. The portion of any deferred tax asset for which it is more likely than not that a tax benefit will not be realized must then be offset by recording a valuation allowance. A full valuation allowance has been established against all of the deferred tax assets (see Note 12) as it is more likely than not that these assets will not be realized given the Company's history of operating losses. The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not to be sustained upon examination based on the technical merits of the position. The amount for which an exposure exists is measured as the largest amount of benefit determined on a cumulative probability basis that the Company believes is more likely than not to be realized upon ultimate settlement of the position.

The Company's policy is to record interest and penalties on uncertain tax positions as income tax expense. As of December 31, 2014, the Company does not believe any material uncertain tax positions are present.

Stock-Based Compensation

At December 31, 2014, the Company had one stock-based compensation plan (see Note 11). The Company applies the provisions of ASC 718, *Compensation—Stock Compensation* ("ASC 718"), which

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

requires the measurement and recognition of compensation expense for all stock-based awards made to employees and non-employees, including employee stock options in the statement of operations.

For stock options issued to employees and members of the board of directors for their services on the board of directors, the Company estimates the grant date fair value of each option using the Black-Scholes option pricing model. The use of the Black-Scholes option pricing model requires management to make assumptions with respect to the expected term of the option, the expected volatility of the Common Stock consistent with the expected life of the option, risk-free interest rates, the value of the Common Stock and expected dividend yields of the Common Stock. For awards subject to service-based vesting conditions, including those with a graded vesting schedule, the Company recognizes stock-based compensation expense, net of estimated forfeitures, equal to the grant date fair value of stock options on a straight-line basis over the requisite service period, which is generally the vesting term. Forfeitures are required to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Stock-based payments issued to non-employees are initially measured at their grant date fair values, are revalued as the underlying equity instruments vest and are recognized as expense over the earlier of the period ending with the performance commitment date or the date the services are completed in accordance with the provisions of ASC 718 and ASC 505-50, *Equity-Based Payments to Non-Employees* ("ASC 505-50"). See Note 11 for a discussion of the assumptions used by the Company in determining the grant date fair value of options granted under the Black-Scholes option pricing model, as well as a summary of the stock option activity under the Company's stock-based compensation plan.

Clinical Trial Expense Accruals

As part of the process of preparing its financial statements, the Company is required to estimate its expenses resulting from its obligations under contracts with vendors, clinical research organizations and consultants and under clinical site agreements in connection with conducting clinical trials. The financial terms of these contracts are subject to negotiations, which vary from contract to contract and may result in payment flows that do not match the periods over which materials or services are provided under such contracts. The Company's objective is to reflect the appropriate trial expenses in its financial statements by matching those expenses with the period in which services are performed and efforts are expended. The Company accounts for these expenses according to the progress of the trial as measured by subject progression and the timing of various aspects of the trial. The Company determines accrual estimates through financial models taking into account discussion with applicable personnel and outside service providers as to the progress or state of consummation of trials, or the services completed. During the course of a clinical trial, the Company adjusts its clinical expense recognition if actual results differ from its estimates. The Company makes estimates of its accrued expenses as of each balance sheet date based on the facts and circumstances known to it at that time. The Company's clinical trial accruals are dependent upon the timely and accurate reporting of contract research organizations and other third-party vendors. Although the Company does not expect its estimates to be materially different from amounts actually incurred, its understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in it reporting amounts that are too high or too low for any particular period. For the

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

years ended December 31, 2013 and December 31, 2014, there were no material adjustments to the Company's prior period estimates of accrued expenses for clinical trials.

Segment Information

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, or decision-making group, in making decisions on how to allocate resources and assess performance. The Company's chief operating decision maker is the chief executive officer. The Company and the chief executive officer view the Company's operations and manage its business as one operating segment. All long-lived assets of the Company reside in the United States.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, *Revenue From Contracts With Customers*, ("ASU 2014-09"). Pursuant to ASU 2014-09, an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. For a public entity, ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. Early application is not permitted. The Company has not yet determined the impact of adoption on the financial statements.

On June 10, 2014, the FASB issued ASU No. 2014-10, *Development Stage Entities (Topic 915): Elimination of Certain Financial Reporting Requirements, Including an Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation ("Topic 915").* The guidance is intended to reduce the overall cost and complexity associated with financial reporting for development stage entities without reducing the availability of relevant information. The FASB also believes the changes will simplify the consolidation accounting guidance by removing the differential accounting requirements for development stage entities. As a result of these changes, there no longer will be any accounting or reporting differences in GAAP between development stage entities and other operating entities. For organizations defined as public business entities. the presentation and disclosure requirements in Topic 915 will no longer be required starting with the first annual period beginning after December 15, 2014, including interim periods therein. Early application is permitted for any annual reporting period or interim period for which the entity's financial statements have not yet been issued (public business entities) or made available for issuance (other entities). The Company early adopted this guidance during the year ended December 31, 2014 and, as a result, the Company no longer presents inception-to-date information in the statements of operations, cash flows, and stockholders' deficit.

In August 2014, FASB issued ASU No. 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern.* The amendments in this update will explicitly require a company's management to assess an entity's ability to continue as a going concern, and to provide related footnote disclosures in certain circumstances. The new standard will be effective in the first annual period ending after December 15, 2016. Early application is permitted. The Company is currently evaluating the potential impact of the adoption of this standard, but believes its adoption will have no impact on its financial position, results of operations or cash flows.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

In November 2014, the FASB issued ASU No. 2014-16, *Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share is more akin to Debt or to Equity*. The amendments in this update clarify how current GAAP should be interpreted in evaluating the economic characteristics and risks of a host contract in a hybrid financial instrument that is issued in the form of a share. Specifically, the amendments clarify that an entity should consider all relevant terms and features—including the embedded derivative feature being evaluated for bifurcation—in evaluating the nature of the host contract. The amendments in this update are effective for public companies for fiscal years and interim periods within those fiscal years, beginning after December 15, 2015 with early adoption permitted. The Company has adopted this guidance for the year ended December 31, 2014 and has properly applied it to its hybrid financial instruments.

In April 2015, the FASB issued ASU No. 2015-03, *Simplifying the Presentation of Debt Issuance Costs.* The guidance requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount. The standard also aligns the GAAP presentation with International Financial Reporting Standards and will remedy the long-standing conflict with the guidance in FASB Concepts Statement No. 6, *Elements of Financial Statements,* which indicates that debt issuance costs do not meet the definition of an asset, because they provide no future economic benefit. For public companies, the standard is effective for financial statements issued for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. For all other entities, the standard is effective for financial statements issued for fiscal years beginning after December 15, 2015, and interim periods within fiscal years beginning after December 15, 2016. Early adoption is permitted for financial statements that have not been previously issued. The new guidance will be applied on a retrospective basis. The Company is currently evaluating the potential impact of the adoption of this standard, but believes its adoption will have no impact on its financial position, results of operations or cash flows.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

3. NET LOSS PER SHARE OF COMMON STOCK, BASIC AND DILUTED

The following table sets forth the computation of basic and diluted net loss per share of Common Stock for the periods indicated:

Net loss per share, basic and diluted calculation:	Year ended December 31, 2013	Year ended December 31, 2014
Net loss	$ (13,045,008)	$ (16,055,591)
Extinguishment upon modification of Series A and A-1 Convertible Preferred Stock	—	$ 12,534,438
Deemed dividend	(81,964)	—
Net loss attributable to Common Stockholders	$ (13,126,972)	$ (3,521,153)
Weighted-average common shares outstanding	633,671	642,054
Net loss per share, basic and diluted	$ (20.72)	$ (5.48)

The following outstanding securities at December, 31, 2013 and 2014 have been excluded from the computation of diluted weighted shares outstanding, as they would have been anti-dilutive:

	December 31, 2013	December 31, 2014
Series A Convertible Preferred Stock	31,116,391	31,116,391
Series A-1 Convertible Preferred Stock	9,074,511	9,074,511
Series B Convertible Preferred Stock	—	58,948,735
Common Stock dividends on Series A-1 Convertible Preferred Stock	2,846	—
Unvested restricted stock	7,142	—
Stock options	381,669	552,726
Warrants on Common Stock	512,686	681,858
Warrants on Preferred Stock	—	625,208
Investor Rights Obligation	—	53,351,117

4. FAIR VALUE MEASUREMENTS

ASC 820, *Fair Value Measurements and Disclosures* ("ASC 820"), defines fair value as the price that would be received to sell an asset, or paid to transfer a liability, in the principal or most advantageous market in an orderly transaction between market participants on the measurement date. The fair value standard also establishes a three-level hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability on the measurement date. The three levels are defined as follows:

- Level 1—inputs to the valuation methodology are quoted prices (unadjusted) for an identical asset or liability in an active market.

- Level 2—inputs to the valuation methodology include quoted prices for a similar asset or liability in an active market or model-derived valuations in which all significant inputs are observable for substantially the full term of the asset or liability.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

4. FAIR VALUE MEASUREMENTS (Continued)

- Level 3—inputs to the valuation methodology are unobservable and significant to the fair value measurement of the asset or liability.

At December 31, 2013 and 2014, the Company's financial instruments included cash and cash equivalents, restricted cash, accounts payable, accrued expenses and other current liabilities, long term debt, the Series A-1 Convertible Preferred Stock warrant liability, the Investor Rights Obligation and the term loan warrant liability. The carrying amounts reported in the accompanying financial statements for cash and cash equivalents, restricted cash, accounts payable, and accrued expenses and other current liabilities approximate their respective fair values because of the short-term nature of these accounts. The estimated fair value of the Company's debt of $7.1 million as of December 31, 2014 was based on current interest rates for similar types of borrowings and is in Level Two of the fair value hierarchy.

The following table presents, for each of the fair value hierarchy levels required under ASC 820, the Company's assets and liabilities that are measured at fair value on a recurring basis:

	December 31, 2013 Fair Value Measurements Using		
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets			
Investments in money market funds*	$ 3,272,811	$ —	$ —
Liabilities			
Series A-1 Convertible Preferred Stock Warrant Liability	$ —	$ —	$ 431,582

	December 31, 2014 Fair Value Measurements Using		
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets			
Investments in money market funds*	$ 11,251,724	$ —	$ —
Liabilities			
Investor Rights Obligation	$ —	$ —	$ 1,112,000
Term Loan Warrant Liability	$ —	$ —	$ 69,684

* Investments in money market funds are reflected in cash and cash equivalents on the accompanying Balance Sheets.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

4. FAIR VALUE MEASUREMENTS (Continued)

Level 3 Valuation

The Series A-1 Convertible Preferred Stock warrant liability is recorded as warrant liability on the accompanying Balance Sheet at December 31, 2013. The Series A-1 Convertible Preferred Stock warrant liability was marked-to-market each reporting period with the change in fair value recorded to other income (expense) in the accompanying Statements of Operations until the warrants were exercised, expired or other facts and circumstances led the Series A-1 Convertible Preferred Stock warrant liability to be reclassified to stockholders' equity (which occurred in July 2014). The fair value of the Series A-1 Convertible Preferred Stock warrant liability was estimated using a Black-Scholes Option Pricing Model within a Monte Carlo simulation model framework. The significant assumptions used in preparing the option pricing model for valuing the Company's warrants to purchase shares of Common Stock as of December 31, 2013, included (i) volatility ranging from 45.0% to 75.0%, (ii) risk free interest rate ranging from 0.07% to 1.38%, (iii) strike price ($28.00), (iv) fair value of Common Stock ($10.08), and (v) expected life ranging from 0.50 to 2.25 years. The warrants for Common Stock issued to holders of Series A-1 Convertible Preferred Stock contained provisions whereby the exercise price could be adjusted. Certain events were not deemed to be traditional dilution events under GAAP. Therefore the warrants were classified as a liability and subject to derivative accounting. The provision was amended in conjunction with the issuance of the Series B Convertible Preferred Stock in July 2014 and the warrants are no longer subject to such adjustments. The warrants were marked to market immediately before the amendment and then classified into permanent equity immediately thereafter.

The Common Stock warrants issued in connection with the convertible promissory notes (see Note 9) were classified as liabilities at the time of issuance due to the variable exercise price prior to completing a qualified financing event. The Common Stock warrant liability was marked-to-market each reporting period with the change in fair value recorded to other income (expense) in the accompanying Statements of Operations until the warrants were exercised, expired or other facts and circumstances led the Common Stock warrant liability to be reclassified to stockholders' equity (which occurred in July 2014 in connection with the issuance of the Series B Convertible Preferred Stock). The fair value of the Common Stock warrant liability was estimated using a Black-Scholes Option Pricing Model. The significant assumptions used in preparing the option pricing model for valuing the Company's warrants to purchase shares of Common Stock as of July 2014 included (i) volatility of 70.0%, (ii) risk free interest rate ranging from 1.62% to 1.74%, (iii) strike price ($5.32 - $10.08) per share, (iv) fair value of Common Stock (ranging from ($5.32 - $10.08) per share, and (v) expected life ranging from 4.8 to 5.0 years. Upon completing the issuance of the Series B Convertible Preferred Stock in July 2014, the exercise price of the Common Stock warrants was fixed at $8.40 per share. The warrants were marked to market immediately before the exercise price was fixed and then classified into permanent equity immediately thereafter.

The term loan warrant liability is recorded as warrant liability on the accompanying Balance Sheet at December 31, 2014. The term loan warrant liability is marked-to-market each reporting period with the change in fair value recorded to other expense in the accompanying Statements of Operations until the warrants are exercised, expire or other facts and circumstances lead the term loan warrant liability to be reclassified to stockholders' equity. The fair value of the term loan warrant liability is estimated using a Black-Scholes Option Pricing Model within a Monte Carlo simulation model framework. The significant assumptions used in preparing the option pricing model for valuing the Company's warrants

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

4. FAIR VALUE MEASUREMENTS (Continued)

to purchase shares of Series B Convertible Preferred Stock as of December 31, 2014, include (i) volatility of 60.0%, (ii) risk free interest rate of 2.1%, (iii) strike price ($0.2999), (iv) fair value of Series B Convertible Preferred Stock ($0.18), and (v) expected life ranging from 8.23 years. Significant decreases in the Company's stock price volatility will significantly decrease the overall valuation of the Company's term loan warrant liability, while significant increases in the Company's stock price volatility will significantly increase the overall valuation.

The Investor Rights Obligation is recorded at fair value in its own line item on the Company's Balance Sheets and will expire at the earlier of (i) an IPO, (ii) a deemed liquidation event, or (iii) June 30, 2017. While outstanding, the Investor Rights Obligation is remeasured at each reporting period and changes in fair value are recorded as a component of other income or expense in the Company's Statement of Operations. The fair value of the Investor Rights Obligation was determined using a valuation model, which considers the probability of achieving certain milestones, the entity's cost of capital, the estimated period the rights will be outstanding, consideration received for the instrument with the rights, the number of shares to be issued to satisfy the rights, the price of such shares and any changes in the fair value of the underlying instrument. The significant assumptions used in preparing the option pricing model for valuing the Company's Investor Rights Obligation as of December 31, 2014, include (i) volatility (60.0%), (ii) risk free interest rate ranging from 0.05% to 0.63%, (iii) strike price ($0.2999), (iv) fair value of Preferred Stock (ranging from $0.00 to $0.18), and (v) expected life ranging from 0.5 to 1.75 years. Significant decreases in the the price per share of the Company's Series B Convertible Preferred Stock and stock price volatility will significantly decrease the overall valuation of its Investor Rights Obligation, while significant increases will significantly increase the overall valuation.

The table presented below is a summary of changes in the fair value of the Company's Level 3 valuation for the Series A-1 Convertible Preferred Stock warrant liability for the year ended December 31, 2013:

	Level 3 Series A Convertible Preferred Stock Warrant Liability
Balance at December 31, 2012	$ —
Warrants issued in connection with Series A-1 Convertible Preferred Stock	310,467
Change in fair value of warrant liability	121,115
Balance at December 31, 2013	$ 431,582

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

4. FAIR VALUE MEASUREMENTS (Continued)

The table presented below is a summary of changes in the fair value of the Company's Level 3 valuation for the Series A-1 Convertible Preferred Stock, Convertible Promissory Notes and Term Loan warrant liabilities and the Investor Rights Obligation for the year ended December 31, 2014:

	Warrant Liability	Investor Rights Obligation	Total
Balance at December 31, 2013	$ 431,582	$ —	$ 431,582
Issuance of warrants with debt and equity financings	844,056	—	844,056
Recording of Investor Rights Obligations at fair value	—	2,598,510	2,598,510
Change in fair value	(779,651)	(1,486,510)	(2,266,161)
Reclassification of liability to stockholders' equity	(426,303)	—	(426,303)
Balance at December 31, 2014	$ 69,684	$ 1,112,000	$ 1,181,684

No other changes in valuation techniques or inputs occurred during the years ended December 31, 2013 and 2014. No transfers of assets between Level 1 and Level 2 of the fair value measurement hierarchy occurred during the years ended December 31, 2013 and 2014.

5. DEFERRED FINANCING COSTS

Deferred financing costs incurred in preparation for filing an IPO consisted of the following:

	December 31,	
	2013	2014
Legal fees	$ 348,995	$ 525,414
Accounting fees	284,858	435,410
Printing costs	65,000	103,282
Expense upon determination that consummation of offering is not probable	—	(1,064,106)
Total deferred financing costs	$ 698,853	$ —

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

6. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following:

	December 31,	
	2013	2014
Furniture and equipment	$ 81,155	$ 34,918
Computers and software	21,647	41,150
Total property and equipment	102,802	76,068
Less accumulated depreciation	(36,815)	(37,328)
Property and equipment, net	$ 65,987	$ 38,740

Depreciation expense was $20,032 and $28,943 for the years ended December 31, 2013 and December 31, 2014, respectively.

7. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities consisted of the following:

	December 31,	
	2013	2014
Compensation and benefits	$ 158,276	$ 129,450
Research and development expenses	124,525	598,883
General and administrative	711,754	159,045
Accrued interest	—	87,736
Total accrued expenses and other current liabilities	$ 994,555	$ 975,114

8. ASSET ACQUISITION AND LICENSE AGREEMENTS

In May 2011, the Company entered into an asset purchase agreement (the "Fells Agreement") with Fells Laboratories LLC ("Fells") for the acquisition of certain assets owned or licensed by Fells, all related to a compound known as FP01. The Company also assumed certain contractual obligations relating to FP01. The principal assets acquired consisted of three patents owned by Fells and a license with Johns Hopkins University ("JHU"), which includes rights to two additional patents. According to the terms of the Fells Agreement, the Company paid $540,000, which consisted of a $340,000 upfront payment in May 2011, which was expensed as research and development during the period from January 31, 2011 to December 31, 2011 and a $200,000 milestone payment in July 2012, which was expensed as research and development during the year ended December 31, 2012, upon the successful completion of the prototype of the formulation of FP01. The Company could have been required to pay up to an additional $2.9 million to Fells upon the achievement of certain contingent development and regulatory milestones; however, Fells has disclaimed any right to receive any future payment under the Fells Agreement and, in addition, the Company has discontinued any further development of FP01 and has provided notice to JHU that the Company is terminating the JHU license effective June 15, 2015.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

8. ASSET ACQUISITION AND LICENSE AGREEMENTS (Continued)

The Company accounted for this transaction as an asset acquisition because it only acquired the assigned rights and technology and did not acquire any processes or activities. The majority shareholder of Fells is the Company's President and Chief Executive Officer.

Pursuant to the terms of the license agreement between JHU and Fells, which the Company assumed in the acquisition, the Company may be required to make contingent milestone payments to JHU of up to $375,000 upon the achievement of certain development and regulatory milestones. The Company expensed $27,500 and $0 for the years ended December 31, 2013 and 2014, respectively, which has been recorded as research and development expenses in the accompanying Statements of Operations. The Company is not currently developing FP01 and does not expect to expense any additional fees to JHU unless the Company out-licenses FP01 to a third party for development.

In March 2013, the Company entered into an exclusive license agreement with Merck pursuant to which Merck granted the Company rights relating to certain small molecule compounds. In consideration of the license, the Company may be required to make initial payments totaling $1,500,000. Pursuant to the license agreement the Company paid $750,000 and upon achievement of FDA acceptance of Merck pre-clinical data and FDA approval of a Phase 3 clinical trial the Company will pay an additional $750,000. The initial payment of $750,000 was recorded as research and development expense in the accompanying Statement of Operations for the year ended December 31, 2013. Additional payments may be due upon achievement of development and regulatory milestones, including first commercial sale. Upon commercialization of an NR2B product, the Company is obligated to pay Merck milestones and royalties on net sales.

In March 2013, the Company entered into a separate exclusive license agreement with Merck pursuant to which Merck granted to the Company certain rights in small molecule compounds which are known to inhibit the activity of catechol-*O*-methyltransferase, or COMT. The Company made a $200,000 upfront payment to Merck, which was recorded as research and development expense in the accompanying Statement of Operations for the year ended December 31, 2013. Under the agreement the Company is required to pay milestone payments upon achievement of various development and regulatory milestones. Upon commercialization of a COMT product, the Company is obligated to pay Merck a royalty on net sales of a COMT product.

9. DEBT

Debt consisted of the following:

	December 31, 2014
Term loan	$ 7,500,000
Less: debt discount	(285,910)
Term Loan, net of debt discount	7,214,090
Less: current portion, net of debt discount	(1,905,879)
Long term debt, net of current portion and debt discount	$ 5,308,211

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

9. DEBT (Continued)

Term Loan

In August 2014, the Company received a $7,500,000 secured term loan from a finance company. The loan is secured by a lien on all of the Company's assets, excluding intellectual property, which was subject to a negative pledge. The loan contains certain additional nonfinancial covenants. In connection with the loan agreement, the Company's cash and investment accounts are subject to account control agreements with the finance company that give the finance company the right to assume control of the accounts in the event of a loan default. Loan defaults are defined in the loan agreement and include, among others, the finance company's determination that there is a material adverse change in the Company's operations. Interest on the loan is at a rate of the greater of 7.95%, or 7.95% plus the prime rate as reported in The Wall Street Journal minus 3.25%. The current interest rate is 7.95%. The loan is interest-only for nine months, and is repayable in equal monthly payments of principal and interest of $304,278 over 27 months. Cash interest expense of $223,594 was recognized during the year ended December 31, 2014 in the accompanying Statement of Operations. Future principal payments are as follows:

Year ending December 31,	
2015	$ 2,077,081
2016	3,335,122
2017	2,087,797
	$ 7,500,000

Additionally, the lender was granted the right to participate in the first tranche of the Company's Series B Convertible Preferred Stock financing in an amount of up to $1,000,000 to be funded on the date the loan agreement was entered into, and (b) in the second tranche of the Company's Series B Convertible Preferred Stock financing in an amount of up to $1,000,000, on the same terms, conditions and pricing afforded to others participating in the applicable financing, if such second tranche occurs. The Lender exercised this right and in August 2014 invested $1,000,000 in the Series B Convertible Preferred Stock financing (see Note 1). The right to participate in the second tranche will expire upon the closing of an IPO.

The Company accounted for the issuance of the term loan and Series B Convertible Preferred Stock financing as a bundled transaction to which a portion of the fair value of the Investor Rights Obligation was allocated to the term loan and Series B Convertible Preferred Stock equity offering based on relative fair value (see Note 10). Using the probability weighted expected return method, or PWERM, the Investor Rights Obligation was initially valued at $162,407 of which the Company allocated $143,252 as a debt discount against the carrying value of the term loan at the time of issuance.

The PWERM involves a forward-looking analysis of the possible future outcomes of a company. Discrete future outcomes considered under the PWERM included non-IPO market based outcomes as well as IPO scenarios. In the non-IPO scenarios, a large portion of the Company's equity value is allocated to the Preferred Stock to incorporate higher aggregate liquidation preferences. In the IPO scenarios, the equity value is allocated pro rata among the shares of Common Stock and each series of Preferred Stock, which causes the Common Stock to have a higher relative value per share than under the non-IPO scenario. The fair value of the Investor Rights Obligation determined using the IPO and

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

9. DEBT (Continued)

non-IPO scenarios are weighted according to the board of directors' estimate of the probability of each scenario.

In connection with the loan from the finance company, the Company issued a warrant to purchase 625,208 shares of Series B Convertible Preferred Stock at an exercise price of $0.2999 per share that is exercisable for a period ending upon the earlier of ten years from the date of issuance and five years following an IPO. The Company's warrant to purchase shares of Series B Convertible Preferred Stock represented a freestanding financial instrument that was indexed to an obligation of the Company to repurchase its Series B Convertible Preferred Stock by transferring assets and therefore met the criteria to be classified as a liability under ASC 480, *Distinguishing Liabilities from Equity*. The Company records the warrant liability at its fair value using the Black-Scholes option pricing model and revalues the warrant at each reporting date. The following table summarizes the fair value and the assumptions used for the Black-Scholes option-pricing model for this warrant:

	Date of Issuance, August 19, 2014	December 31, 2014
Fair value	$ 115,056	$ 69,684
Fair value of Series B Convertible Preferred Stock	$ 0.25	$ 0.20
Expected dividend yield	0.0%	0.00%
Risk-free interest rate	2.4%	2.1%
Expected stock price volatility	70.0%	60.0%
Expected term	9.8 years	8.3 years

Upon issuance of the term loan, the Company paid lender fees of $110,000 and is required to pay a one-time fee at maturity of $187,500. A portion of the Investor Rights Obligation was allocated to the term loan and equal to $143,252 (as discussed above and see Notes 4 and 10). The lender fees, warrants, and Investor Rights Obligation were recorded as a discount to the carrying amounts of the current and long term portions of the term loan. Amortization of the debt discount and accretion of the one-time fee was $68,861 and $36,394, respectively, during the year ended December 31, 2014 and is reflected as a component of interest expense within the Company's Statements of Operations.

Convertible Promissory Notes

From April through June 2014, the Company entered into several convertible promissory notes for aggregate proceeds of $1.25 million. The loans bear interest at an annual rate of 6.0% and mature within 12 months from their issuance date. In the event that the Company completed a qualified equity offering that generated aggregate proceeds of at least $10 million, the notes would automatically convert into the shares issued in connection with the qualified equity offering and at a conversion price equal to 75% of the qualified equity offering price. The Company accounted for the notes as stock-settled debt, since the value of any future stock issued upon conversion will be equal to 125% of the principal and interest to which the Company amortized $145,987 into earnings and recorded as interest expense over the term of the notes. In the event that an equity offering did not occur by the maturity date, all interest and principal would have become due. The notes converted on July 11, 2014 when the Series B Convertible Preferred Stock equity offering was completed. The principal amount of the notes, and interest of $9,016, was converted at 75% of the Series B Convertible Preferred Stock original issuance price, or $0.22492 per share, and the Company issued 5,597,618 shares of Series B Convertible Preferred Stock.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

9. DEBT (Continued)

In connection with issuing the notes, the holders received warrants to purchase 148,854 shares of the Company's Common Stock. The warrants are exercisable at the option of the holder at any time during their five-year term at a price per share at which equity securities are sold in a qualified financing event or offered to the public in the event of an IPO. Upon completing the Series B Convertible Preferred Stock equity offering on July 11, 2014, a qualified financing event occurred and the holders are eligible to exercise their warrants, at any time, at an exercise price of $8.40 per share. In the event of an IPO, change in control or capital restructuring, as set forth in the warrant, the Company will provide the holders of the warrants notification of such events to afford the holders the ability to exercise their warrants prior to the event. If the holder does not exercise the warrant, then the warrants shall expire in accordance with their terms. The exercise price of the warrants does not contain "down round" protection provisions.

Due to the variable exercise price and number of shares underlying the warrant prior to the completion of the qualified financing, the warrants were classified as liabilities and subject to derivative accounting. On July 11, 2014, the exercise price and number of shares underlying the warrant were fixed and the warrants were reclassified to permanent equity. At the time of the reclassification, the warrants had a fair value of $379,000.

The Company recorded the warrant liability at its fair value using the Black-Scholes option pricing model and revalued the warrant at each reporting date. The following table summarizes the fair value and the assumptions used for the Black-Scholes option-pricing model for this warrant:

	Dates of Issuance	July 11, 2014 Reclassification
Fair value	$729,000	$379,000
Fair value of Common Stock	$5.32 - $10.08	$5.32
Expected dividend yield	0.0%	0.0%
Risk-free interest rate	1.62% - 1.74%	1.65%
Expected stock price volatility	70.0%	70.0%
Expected term	4.8 - 5.0 years	4.8 - 4.9 years

The fair value of the warrants were $729,000 at issuance and recorded as a discount to the face value of the convertible promissory notes and was fully amortized into interest expense prior to the conversion into shares of Series B Convertible Preferred Stock.

Demand Notes

On July 3, 2014, the Company issued $999,666 in demand notes that were converted on July 11, 2014 upon completing the Series B Convertible Preferred Stock equity offering. The demand note holders were the majority participants in the Series B Convertible Preferred Stock equity offering. The purpose of the notes were to provide short term financing between the targeted closing date of Series B Convertible Preferred Stock equity offering, July 3, 2014, and the actual closing date of July 11, 2014. The demand notes converted at the original issuance price of Series B Convertible Preferred Stock of $0.2999 per share, and the holders received 3,333,331 shares of Series B Convertible Preferred Stock (see Note 10). Interest at 0.31% was not paid due to the short term that the notes were outstanding.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

10. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT

At December 31, 2014, the Company was authorized to issue two classes of stock, Common Stock and Preferred Stock. The total number of shares of capital stock the Company was authorized to issue was 385,190,902 of which 230,000,000 was Common Stock and 155,190,902 was Preferred Stock. All shares of Common and Preferred Stock have a par value of $0.001 per share. 31,116,391 of the authorized shares of Preferred Stock are designated as Series A Convertible Preferred Stock and 9,074,511 of the authorized shares of Preferred Stock are designated as Series A-1 Convertible Preferred Stock and the remaining 115,000,000 shares have been designated as Series B Convertible Preferred Stock. The rights, preferences, privileges and restrictions granted to and imposed on Preferred Stock are described below.

Preferred Stock Voting Agreement and Rights

The holders of the Preferred Stock have the right to one vote for each share of Common Stock into which such share of Preferred Stock could then be converted. In addition, the holders of the shares of Series A Convertible Preferred Stock and Series A-1 Convertible Preferred Stock, exclusively and as a single class, shall be entitled to elect one director of the Company, the holders of the Shares of Series B Convertible Preferred Stock, exclusively and as a single class, shall be entitled to elect five directors of the Company and the holders of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect two directors of the Company. The holders of all classes of voting stock (including Preferred Stock) voting as a single class shall elect the balance of directors of the Company. In addition, upon a deemed liquidation event or a sale of the Company, in each case approved by the holders of a majority of the then outstanding shares of Preferred Stock and the board of directors, each stockholder of the Company has agreed to approve such deemed liquidation event or a sale of the Company and sell any shares held by such shareholder in connection with any such transaction.

Preferred Stock Conversion

Each share of Series A Convertible Preferred Stock will be convertible into 0.04464 shares of Common Stock, each share of Series A-1 Convertible Preferred Stock will be convertible into 0.05357 shares of Common Stock and each share of Series B Convertible Preferred Stock will be convertible into 0.03571 share of Common Stock, subject to certain anti-dilution protections, at the option of the holder. Each share of Preferred Stock will automatically convert upon (i) the closing of the sale of shares of Common Stock in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act, resulting in at least $45.0 million of gross proceeds to the Company (a "qualified initial public offering"), or (ii) the occurrence of an event, specified by a vote or written consent of the holders of a majority of the then outstanding shares of Preferred Stock. As of December 31, 2014, the Preferred Stock is convertible into 3,980,422 shares of Common Stock.

Preferred Stock Dividends

Prior to the issuance of Series B Convertible Preferred Stock, the Series A Convertible Preferred Stock did not bear dividends. The Series A-1 Convertible Preferred Stock accrued dividends payable solely in shares of Common Stock at a rate of 2.5% per annum and could potentially increase up to 12.5% per annum if the Company did not complete a qualified IPO by certain dates. Accruing Common Stock dividends were only payable upon the conversion of Series A-1 Convertible Preferred

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

10. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

Stock into Common Stock or certain deemed liquidation events. Dividends on the Series A-1 Convertible Preferred Stock were considered a conversion rate adjustment, and therefore no dividends had been accrued as of December 31, 2013. Coinciding with the issuance of Series B Convertible Preferred Stock, the stock dividends earned through the July 11, 2014, or 6,877 shares of Common Stock, were issued as to the holders of Series A-1 Convertible Preferred Stock and thereafter those rights were terminated.

Since the issuance of Series B Convertible Preferred Stock, all series of Preferred Stock are entitled to a non-cumulative annual dividend of 8.0%. Dividends are paid when, as, and if declared by the board of directors.

Preferred Stock Redemption Rights

The Preferred Stock is subject to redemption under certain "deemed liquidation" events, as defined, and as such, the Preferred Stock is considered contingently redeemable for accounting purposes. Accordingly, the Preferred Stock has been recorded within temporary equity in the financial statements. The Company has not adjusted the Preferred Stock to its redemption amount at each reporting period, as the redemption of such Preferred Stock is not deemed probable of occurrence during the periods presented. The redemption of the Preferred Stock is not considered probable as the redemption is contingent on the occurrence of such "deemed liquidation" events, which include (i) the acquisition of the Company by another entity by means of any transaction or a series of related transactions, unless the existing stockholders of the Company continue to hold at least 50% of the voting power of the surviving or acquiring entity after such transaction; and (ii) a sale of all or substantially all of the assets of the Company. The Company has concluded that none of these events are probable during the periods presented.

Preferred Stock Liquidation Preference

In the event of any liquidation, dissolution or winding up of the Company prior to the conversion, the holders of the Preferred Stock will be entitled to a liquidation preference in pari passu before any liquidation preference payments are made to the Common shareholders. The liquidation preference payment is equal to the greater of (i) original issuance plus any declared but unpaid dividends, or (ii) the amount that a Preferred holder would have been entitled to receive if they had converted to common immediately prior to liquidation.

Right of First Refusal and Co-sale Agreement

The Preferred Stock holders along with the holders of Common Stock have entered into a Right of First Refusal and Co-Sale Agreement with the Company in order to provide certain restrictions on the transfer of capital stock and to grant first refusal and co-sale rights to the Company and to the holders of Preferred Stock.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

10. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

Investors' Rights Agreement and Registration Rights

The holders of the Preferred Stock have certain registration rights with respect to the Common Stock into which the shares are convertible. If at any time after the earlier of three years after the date of the Investors' Rights Agreement or 180 days after the effective date of a registration statement for an IPO, the Company receives a request from the holders of a majority of the Series B Convertible Preferred Stock then outstanding that are registerable, the Company shall file a Form S-1 registration statement covering those shares with an anticipated offering price, net of expenses, of at least $10 million. If at any time after the Company is eligible to use a Form S-3 registration statement, the Company receives a request from the holders of outstanding securities that are registerable, the Company shall file a registration statement on Form S-3 covering those shares so long as certain conditions are met, including an anticipated offering price, net of expenses, of at least $1 million.

Series A Convertible Preferred Stock Transactions

On February 14, 2012, March 23, 2012 and April 4, 2012, the Company completed closings of its private placement offering of Series A Convertible Preferred Stock in the total amount of approximately $19.0 million. The offering price for each unit was $0.75, which consisted of one share of Series A Convertible Preferred Stock and a warrant. Each investor in the offering received a five-year warrant to purchase such number of the Company's shares of Common Stock equal to 25% of the number of shares of Series A Convertible Preferred Stock purchased by such investor at an exercise price equal to $28.00 per share. The placement agent received an 8% placement fee and a 2% corporate finance fee totaling approximately $1.9 million. The number of shares of Series A Convertible Preferred Stock issued in the three closings was 25,305,583 along with investor warrants to purchase 225,869 shares of Common Stock at an exercise price equal to $28.00 per share. The placement agent received warrants to purchase 126,091 shares of Common Stock on the same terms and conditions as the other warrants that the purchasers of Series A Convertible Preferred Stock received in this offering.

On May 18, 2012, the Company completed a direct private placement of its Series A Convertible Preferred Stock in the amount of $1.2 million also at a purchase price of $0.75 per unit. The number of shares of Series A Convertible Preferred Stock issued in the closing was 1,600,000 along with warrants to purchase 14,284 shares of Common Stock at $28.00 per share. On March 23, 2012, a convertible demand promissory note with an outstanding principal balance of $3.0 million, plus accrued interest of $58,000, was converted into 4,077,475 shares of Series A Convertible Preferred Stock along with warrants to purchase 36,406 shares of Common Stock at an exercise price equal to $28.00 per share. Further, the Company paid $375,000 to the placement agent as compensation for the direct private placement and conversion of the convertible demand promissory note and recorded the compensation as a reduction of the proceeds from the Series A Convertible Preferred Stock and warrants. In March 2012, an amount of $100,000 due to a related party was converted into 133,333 shares of Series A Convertible Preferred Stock and a warrant to purchase 1,190 shares of Common Stock (see Note 8).

The net proceeds to the Company from these Series A Convertible Preferred Stock issuances after offering costs was approximately $17.7 million.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

10. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

In connection with the issuance of the Series B Convertible Preferred Stock in 2014, the holders of Series A Convertible Preferred Stock waived their contractual anti-dilution rights set forth in the Company's amended and restated articles of incorporation (as amended from time to time, "Articles"). In exchange for waiving this right, Company adjusted the conversion price for Series A Convertible Preferred Stock of $0.75 per share to $0.60 per share. With the assistance of a third party valuation firm, management determined the fair value of the Series A Convertible Preferred Stock to be $0.34 per share at the time of extinguishment. The $9,393,746 gain on extinguishment was equal to the excess carrying value of the Series A Convertible Preferred Stock of $19,856,632 over the fair value of the amended Series A Convertible Preferred Stock of $10,462,886. Because the underlying transaction was between the Company and its equity investors, the Company accounted for the extinguishment as a noncash gain to additional paid in capital in accordance with ASC 470-50-40-2 and included as a component of net loss attributable to common stockholders.

Series A-1 Convertible Preferred Stock Transaction

In August 2013, the Company completed a $6.8 million private equity offering. The offering price for each unit was $0.75, which consisted of one share of Series A-1 Convertible Preferred Stock and a warrant. The number of shares of Series A-1 Convertible Preferred Stock issued was 9,074,511 shares along with investor warrants to purchase 80,966 shares of Common Stock with an initial exercise price equal to (i) $28.00 per share of Common Stock if such warrant is exercised prior to a qualified IPO or (ii) the public offering price for a share of Common Stock sold in a qualified IPO if such warrant is exercised after such qualified IPO, in each instance, subject to further adjustments as set forth in such warrants. The warrants expire on the fifth anniversary from their original issuance date. The net proceeds to the Company after offering costs were approximately $6.1 million.

The gross proceeds of the offering were first allocated to the warrants based on the fair value of the warrants at that time, with the residual proceeds allocated to the Series A-1 Convertible Preferred Stock ($6.6 million). All offering costs were allocated between the Series A-1 Convertible Preferred Stock ($700,000—which reduced the initial carrying value of the Series A-1 Convertible Preferred Stock) and the warrants ($27,000—which was recorded as general and administrative expenses in the 2013 statement of operations). In addition, the placement agent received, as compensation for the transaction, warrants to purchase 24,306 shares of Common Stock priced at $21.00 per share. The fair value of the placement agent warrants was $72,000 at the time of issuance, and that value was allocated to the Series A-1 Convertible Preferred Stock ($69,000—which reduced the initial carrying value of the Series A-1 Convertible Preferred Stock) and the warrants ($3,000—which was recorded as general and administrative expenses in the 2013 statement of operations). The fair value of all warrants associated with this transaction on the date of issuance was $310,467 and was recorded as a long-term liability due to the fact that these warrants met the definition of derivative instruments and were not indexed to the Company's own stock. These warrants are required to be marked to fair value at each reporting period. Upon the issuance of Series B Convertible Preferred Stock, the exercise price of the A-1 warrants is no longer subject to adjustment. The A-1 warrants were marked to fair value immediately before the amendment and then classified into permanent equity immediately thereafter.

In connection with the issuance of the Series A-1 Convertible Preferred Stock, the Company recognized the intrinsic value of a beneficial conversion of $6.6 million as additional paid-in capital.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

10. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

The beneficial conversion amount was computed as the difference between the conversion price and the fair value of the Common Stock into which the Series A-1 Convertible Preferred Stock is convertible, multiplied by that number of shares issuable upon conversion. The beneficial conversion amount is equal to the entirety of the proceeds allocated to the Series A-1 Convertible Preferred Stock because the most beneficial conversion price is mathematically limitless by virtue of certain conversion adjustments associated with cumulative dividends. Specifically, the Series A-1 Convertible Preferred Stock conversion price is adjusted each period by annual cumulative dividends of 2.5% to be paid through the issuance of Common Stock only upon conversion. The effect of dividend adjustments to the conversion price could have ultimately resulted in a conversion price of less than $0.001, unless the Series A-1 Convertible Preferred Stock was converted or redeemed earlier. The discount for the beneficial conversion feature was being accreted over the period in which the holders would realize the beneficial conversion feature, or 31 years. Upon the issuance of Series B Convertible Preferred Stock, the 2.5% dividend provision was amended which resulted in the reversal of the unamortized beneficial conversion feature discount of $6.6 million. The Company concluded that a portion of the reacquisition price should be allocated to the repurchase of the beneficial conversion option. The amount of the reacquisition price allocated to the reacquisition of the beneficial conversion option was equal to the intrinsic value that was previously recognized for the beneficial conversion feature. The residual amount was allocated to the extinguishment of the Series A-1 Convertible Preferred Stock, and the difference between the residual amount allocated to the Series A-1 Convertible Preferred Stock and the carrying amount of the Series A-1 Convertible Preferred Stock was added to earnings available to common stockholders for purposes of computing earnings per share.

In addition, for any investor of Series A Convertible Preferred Stock who also participated in the Series A-1 Convertible Preferred Stock offering, the Company amended the terms of the original warrants issued with respect to such Series A Convertible Preferred Stock in 2012 reducing the exercise price from $28.00 per share of Common Stock to $14.00 per share of Common Stock provided that such investor purchased a minimum of 40% of their original Series A Convertible Preferred Stock investment.

In connection with the issuance of the Series B Convertible Preferred Stock in 2014, the holders of A-1 Preferred Stock waived their contractual anti-dilution rights under the Articles. In exchange for waiving this right, Company adjusted the conversion price for Series A-1 Convertible Preferred Stock of $0.75 per share to $0.50 per share and in exchange for waiving the 2.5% cumulative dividend right, the Company issued to the holders, 6,877 shares of Common Stock.

With the assistance of a third party valuation firm, management determined the fair value of the Series A-1 Convertible Preferred Stock to be $0.37 per share at the time of extinguishment. The $3,140,692 gain on extinguishment was equal to the excess carrying value of the Series A-1 Convertible Preferred Stock of $1 plus the unamortized beneficial conversion feature of $6,567,063, over the fair value of the amended Series A-1 Convertible Preferred Stock of $3,389,330 and the fair value of the 6,877 shares of Common Stock of $37,041. Because the underlying transaction was between the Company and its equity investors, the Company accounted for the extinguishment as a noncash charge to additional paid in capital in accordance with ASC 470-50-40-2.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

10. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

Series B Convertible Preferred Stock Transaction

On July 11, 2014, the Company completed an initial closing of an equity offering for shares of its Series B Convertible Preferred Stock and on August 19, 2014 completed a second closing. Pursuant to the terms of the agreement, the Company issued an aggregate of 50,017,786 shares of Series B Convertible Preferred Stock at an original issuance price of $0.2999 per share for gross proceeds of $15,000,000.

In addition, and pursuant to the terms of, several convertible promissory notes issued from April through June 2014, the Company issued 5,597,618 shares of Series B Convertible Preferred Stock upon the conversion of the outstanding principal and interest due under the convertible promissory notes in the aggregate amount of $1,259,016. The conversion price for the convertible promissory notes was equal to $0.22492, or 75% of the original issuance price of the Series B Convertible Preferred Stock. The demand notes issued in July 2014, with an aggregate principal balance of $996,666, was converted into 3,333,331 shares of Series B Convertible Preferred Stock at a conversion price of $0.2999 per share. See Note 9 for additional information regarding the terms and provisions of the convertible promissory notes and demand notes.

The second closing of the Series B Convertible Preferred Stock equity offering was with the term loan lender. Pursuant to the same terms and conditions of the initial offering, the Company issued 3,334,445 shares of Series B Convertible Preferred Stock to the term loan lender at an original issuance price of $0.2999 per share, for gross proceeds of $1,000,000, which is included in the $15,000,000 described above.

At any time after the initial offering of the Series B Convertible Preferred Stock and prior to the earlier of (i) an IPO, (ii) a deemed liquidation event, or (iii) June 30, 2017, certain participants in the Series B Convertible Preferred Stock equity offering may purchase up to an additional 53,351,117 shares of Series B Convertible Preferred Stock under the same terms and conditions of the initial offering. In the event of a second closing, if an eligible holder of Series B Convertible Preferred Stock does not participate at their full commitment, they are subject to a "pay to play" penalty whereby they would be required to convert each share of Series B Convertible Preferred Stock into 1/10th of a share of Common Stock.

The right of the investors (the "Investor Rights Obligation") to purchase Series B Convertible Preferred Stock represented a freestanding financial instrument and was indexed to an obligation of the Company to repurchase its Series B Convertible Preferred Stock by transferring assets. As such, the Company accounted for the Investor Rights Obligation as a liability in accordance with ASC 480. The Company adjusted the carrying value of the liability to its estimated fair value at each reporting date. Increases or decreases in the fair value of the Investor Rights Obligation were recorded as other income (expense) in the accompanying statement of operations. The fair value of the liability was determined using a valuation model, which considers the probability of achieving certain milestones, the entity's cost of capital, the estimated period the rights will be outstanding, consideration received for the instrument with the rights, the number of shares to be issued to satisfy the rights, the price of such shares and any changes in the fair value of the underlying instrument. At the date of issuance in July 2014, the Company recorded the Investor Rights Obligation at its initial estimated fair value of $2,598,510 of which $2,455,258 and $143,252 were recorded as a reduction to the carrying of the

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

10. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

Series B Convertible Preferred Stock and term loan (see Note 9), respectively. The change in fair value of the Investor Rights Obligation was $1,486,510 for the year ended December 31, 2014, and was recorded as other expense in the accompanying Statement of Operations.

The Company incurred $442,948 in costs associated with issuing the Series B Convertible Preferred Stock of which $26,921 was allocated to the Investor Rights Obligation and $416,027 was recorded as a reduction to the carrying value of the Series B Convertible Preferred Stock.

Common Stock Warrants

During 2012, a total of 277,749 warrants to purchase shares of Common Stock at an exercise price equal to $28.00 per share were issued to investors in connection with the issuance of the Company's Series A Convertible Preferred Stock, the conversion of the convertible demand promissory note and the amount due to related party. The warrants became exercisable at the grant date. In addition, a total of 126,091 warrants to purchase Common Stock at an exercise price equal to $28.00 per share were issued to the placement agent. The Company determined the fair value of the warrants to be approximately $2.80 per warrant. The fair value was calculated using a Black-Scholes pricing model using a fair market value of $8.68 per share for its Common Stock and similar assumptions disclosed later in Note 11.

In August 2013, a total of 80,966 warrants to purchase shares of Common Stock at an exercise price now fixed at $28.00 per share were issued to investors in connection with the Company's Series A-1 Convertible Preferred Stock. The warrants became exercisable at the grant date. In addition, a total of 24,306 warrants to purchase Common Stock at an exercise price equal to $21.00 per share were issued to the placement agent. The fair value was calculated using a fair market value of $8.96 per share for its Common Stock and similar assumptions disclosed in Note 4. The total fair value of the warrants issued to the placement agent on the date of grant was approximately $72,000, recorded as offering costs. In addition, in the event a holder of the Company's Series A Convertible Preferred Stock purchased a number of shares of Series A-1 Convertible Preferred Stock in an amount equal to at least 40% of the shares of Series A Convertible Preferred Stock owned by such holder, the Company amended the warrant to purchase the Company's Common Stock by such holder received in connection with his, her or its purchase of shares of Series A Convertible Preferred Stock such that the exercise price per share of such warrant was reduced from $28.00 to $14.00. A total of 58,849 warrants were amended. This modification was recorded as a deemed dividend to the Preferred A holders in the amount of $81,964.

In December 2013, a warrant to purchase 3,571 shares of Common Stock at an exercise price equal to $28.00 per share was issued to a consulting firm which is assisting the Company in identifying commercial and strategic opportunities. The Company determined the fair value of the warrants to be approximately $3.64 per warrant. The fair value was calculated using a Black-Scholes pricing model using a fair market value of $10.08 per share for its Common Stock and similar assumptions disclosed later in Note 11.

In connection with the convertible promissory notes issued from April through June 2014, the holders received warrants to purchase 148,854 shares of the Company's Common Stock in the aggregate. The warrants are exercisable at the option of the holder at any time during their five-year

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

10. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

term at a price per share at which equity securities are sold in a qualified financing event or offered to the public in the event of an IPO. Upon completing the Series B Convertible Preferred Stock equity offering on July 11, 2014, a qualified financing event occurred and the holders are eligible to exercise their warrants, at any time, at an exercise price of $8.40 per share. In the event of an IPO, change in control or capital restructuring as set forth in the warrant, the Company will provide the warrant holders notification of such events to afford the holders the ability to exercise their warrants prior to the event. If the holders do not exercise his/her right, then the warrants shall expire in accordance with their terms. The exercise price of the warrants does not contain "down round" protection provisions.

Due to the variable exercise price at each issuance from April through June 2014, the warrants were classified as liabilities and subject to derivative accounting. On July 11, 2014, the exercise price was fixed and met the requirements for equity classification.

In July 2014, a warrant to purchase 17,863 shares of Common Stock at an exercise price equal to $8.40 per share was issued to a consulting firm for advisory services. The Company determined the fair value of the warrants to be approximately $2.52 per warrant. The fair value was calculated using a Black Scholes pricing model using a fair market value of $5.32 per share for its Common Stock and similar assumptions disclosed later in Note 11.

In September 2014, a warrant to purchase 2,380 shares of Common Stock at an exercise price equal to $8.68 per share was issued to a former member of the board of directors. The Company determined the fair value of the warrants to be approximately $3.36 per warrant. The fair value was calculated using a Black-Scholes pricing model using a fair market value of $5.32 per share for its Common Stock and similar assumptions disclosed later in Note 11.

At December 31, 2014, the following Common Stock warrants were outstanding:

Number of shares underlying warrants issued to investors of Convertible Preferred Stock		Exercise price per share	Expiration Date
109,997	$	28.00	February 2017
29,277	$	14.00	February 2017
90,550	$	28.00	March 2017
29,571	$	14.00	March 2017
130,234	$	28.00	April 2017
14,285	$	28.00	July 2017
80,966	$	28.00	August 2018
24,306	$	21.00	August 2018
3,571	$	28.00	December 2018
59,543	$	8.40	April 2019
23,817	$	8.40	May 2019
65,498	$	8.40	June 2019
17,863	$	8.40	July 2019
2,380	$	8.68	May 2022
681,858			

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

10. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

Series B Convertible Preferred Stock Warrants

In August 2014, a warrant to purchase 625,208 shares of Series B Convertible Preferred Stock, at an exercise price equal to $0.2999 per share, was issued to the term loan lender in conjunction with the loan of $7.5 million (see Note 9). The fair value was calculated at $115,056 using a Black-Scholes pricing model using a fair market value of $0.25 per share for its Series B Convertible Preferred Stock and similar assumptions disclosed later in Note 11.

11. STOCK-BASED COMPENSATION

2011 Stock Incentive Plan

On April 28, 2011, the board of directors adopted the Plan reserving and authorizing up to 178,571 shares of Common Stock for stock-based compensation awards to attract, retain and reward eligible employees, consultants, and non-employee directors. The options have a contractual term of ten years. Generally, the options vest annually over three or four years, as determined by the board of directors, upon each option grant, although certain option grants in 2014 were fully vested on the grant date. On January 10, 2012, the board of directors and stockholders of the Company approved an amendment to the Plan authorizing an increase in the aggregate number of shares reserved for issuance under the Plan from 178,571 to 285,714 shares of Common Stock. On May 6, 2013, the board of directors approved an amendment to the Plan authorizing an increase in the aggregate number of shares reserved for issuance under the Plan from 285,714 to 704,428 shares of Common Stock. As of December 31, 2014, there were 212,383 shares remaining under the Plan available for future issuance.

On May 8, 2012, the board of directors approved three grants of non-qualified stock options outside of the Plan aggregating 167,857 to the President and Chief Executive Officer and two non-employee directors of the Company at $8.68 per share, one-third vesting on three consecutive annual anniversaries.

The estimated grant date fair market value of the Company's stock-based awards is amortized ratably over the awards' service periods. Stock- based compensation expense recognized was as follows:

	Year Ended December 31, 2013	Year Ended December 31, 2014
Research and development	$ 165,724	$ 201,653
General and administrative	582,924	884,928
Total stock-based compensation	$ 748,648	$ 1,086,581

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

11. STOCK-BASED COMPENSATION (Continued)

A summary of option activity is as follows:

	Options Outstanding			
	Number of Shares	Weighted-Average Exercise Price	Fair Value Of Options Granted	Weighted Average Remaining Contractual Term (in years)
Balance, December 31, 2013	381,669	$ 7.78		8.39
Granted	177,484	$ 12.14	$ 389,538	
Forfeitures	(6,427)	$ 8.68		
Balance, December 31, 2014	552,726	$ 9.17		8.17
Vested or expected to vest at December 31, 2014	552,726	$ 9.17		8.17
Exercisable at December 31, 2014	440,442	$ 9.26		7.72

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's Common Stock for those stock options that had exercise prices lower than the fair value of the Company's Common Stock. As of December 31, 2014, the aggregate intrinsic value of options outstanding and vested and expected to vest were $22,000.

The per-share weighted-average fair value of the options granted during 2013 and 2014 was estimated at $5.60 and $2.24, respectively, on the date of grant using the Black-Scholes option-pricing model with the following assumptions:

	Year Ended December 31,	
	2013	2014
Risk-free interest rate	0.85 - 1.90%	0.85 - 1.97%
Expected term of options (in years)	6.0	5.0 - 6.25
Expected stock price volatility	70.0%	70.0%
Expected annual dividend yield	0.00%	0.00%

The valuation assumptions were determined as follows:

- Risk-free interest rate: The Company bases the risk-free interest rate on the interest rate payable on U.S. Treasury securities in effect at the time of grant for a period that is commensurate with the assumed expected option term.

- Expected term of options: The Company estimates the expected life of its employee stock options using the "simplified" method, as prescribed in Staff Accounting Bulletin No. 107, whereby, the expected life equals the arithmetic average of the vesting term and the original contractual term of the option due to its lack of sufficient historical data.

- Expected stock price volatility: The Company estimated the expected volatility based on actual historical volatility of the stock price of other publicly-traded biotechnology companies engaged in lines of business that are the same or similar to the Company's. The Company calculated the

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

11. STOCK-BASED COMPENSATION (Continued)

historical volatility of the selected companies by using daily closing prices over a period of the expected term of the associated award. The companies were selected based on their enterprise value, risk profiles, position within the industry, and with historical share price information sufficient to meet the expected term of the associated award. A decrease in the selected volatility would decrease the fair value of the underlying instrument.

- Expected annual dividend yield: The Company estimated the expected dividend yield based on consideration of its historical dividend experience and future dividend expectations. The Company has not historically declared or paid dividends to stockholders. Moreover, it does not intend to pay dividends in the future, but instead expects to retain any earnings to invest in the continued growth of the business. Accordingly, the Company assumed and expected dividend yield of 0.0%.

The Company considered numerous objective and subjective factors in the assessment of fair value of its Common Stock, including the price for the Company's Series A Convertible Preferred Stock that was sold to investors and the rights, preferences and privileges of the Series A Convertible Preferred Stock and Common Stock, the Company's financial condition and results of operations during the relevant periods, including the status of the development of the Company's product candidates, and the status of strategic initiatives. These estimates involve a significant level of judgment.

As of December 31, 2014, there was $0.2 million of total unrecognized compensation expense, related to unvested options granted under the Plan, unvested options granted outside of the Plan, and restricted stock to be recognized as follows:

Year ending December 31,	
2015	$ 175,312
2016	24,493
2017	942
2018	79
	$ 200,826

Restricted Stock

During July and August of 2011 certain issuances of Common Stock totaling 14,285 shares, originally issued in April 2011 to non-employees, were modified as restricted stock and are subject to a three year vesting period. The modification resulted in $41,000 and $24,000 of additional research and development expense recorded for the years ended December 31, 2013 and 2014, respectively. There were no issuances or forfeitures of restricted during the years ended December 31, 2013 and 2014. There were 3,571 and 7,142 restricted that vested during the comparable periods. As of December 31, 2014, all restricted shares are fully vested.

12. INCOME TAXES

The Company's reserves related to taxes are based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is more likely than not to be

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

12. INCOME TAXES (Continued)

realized. The Company recognized no material adjustment for unrecognized income tax benefits. Through December 31, 2014, the Company had no unrecognized tax benefits or related interest and penalties accrued.

The significant components of the Company's deferred tax assets are comprised of the following:

	December 31,	
	2013	2014
Deferred tax assets:		
Net operating losses	$ 9,031,629	$ 16,113,309
Research and development credits	1,040,789	1,640,277
Deferred rent	9,339	17,844
Accrued compensation	58,142	31,060
Stock compensation	906,923	1,349,899
Basis difference in tangible and intangible assets	596,003	340,570
Total deferred tax assets	11,642,825	19,492,959
Less valuation allowance	(11,642,825)	(19,492,959)
Net deferred tax asset	$ —	$ —

For the year ended December 31, 2014, the Company increased the valuation allowance by $7.9 million to fully reserve for the value of deferred tax assets. Due to continued operating losses, there is no indication that it is more likely than not that the Company will be able to utilize its deferred tax assets.

As of December 31, 2014 the Company had $40,850,000 of Federal and Maryland net operating loss ("NOL") carryforwards that will begin to expire in 2031. As of December 31, 2014 the Company had $1,143,000 and $497,000 of Maryland and federal research and development credits, respectively, that will begin to expire in 2018. The NOL and research and development credit carryforwards are subject to review and possible adjustment by the Internal Revenue Service and state tax authorities. NOL and tax credit carryforwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant shareholders over a three-year period in excess of 50%, as defined under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, as well as similar state tax provisions. This could limit the amount of NOLs and research and development credits that the Company can utilize annually to offset future taxable income or tax liabilities. The amount of the annual limitation, if any, will be determined based on the value of the Company immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years. All of our tax years are currently open to examination by each tax jurisdiction in which the Company is subject to taxation.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

12. INCOME TAXES (Continued)

A reconciliation of income tax expense computed at the statutory federal income tax rate to income taxes as reflected in the financial statements is as follows:

	December 31,	
	2013	2014
Federal Statutory Rate	34.00%	34.00%
Permanent Differences	(0.03)%	(0.02)%
Warrants	(0.31)%	4.80%
State Taxes	7.87%	7.22%
Research and Development Credit	4.90%	2.75%
Other	0%	0.15%
Change in valuation allowance	(46.43)%	(48.90)%
Effective income tax rate	0.0%	0.0%

13. COMMITMENTS AND CONTINGENCIES

Offer Letters

The Company has entered into offer letters with certain of its executives. The letters provide for, among other things, salary, bonus and severance payments.

Office Lease

In August 2013, the Company entered into a lease for new corporate office space location in Baltimore, Maryland. The lease provides for three months of rent abatement and includes escalating rent payments. Rent expense is recognized on a straight-line basis over the term of the lease. During 2014 rent expense amounted to approximately $192,000. Pursuant to the terms of such lease, the Company's future lease obligation is as follows:

Year ending December 31,	
2015	$ 147,384
2016	151,068
2017	154,845
2018	158,716
	$ 612,013

14. SUBSEQUENT EVENTS

The Company has completed an evaluation of all subsequent events through April 29, 2015, the date on which these financial statements were available to be issued, to ensure that these financial statements include appropriate disclosure of events both recognized in the financial statements as of December 31, 2014 and events which occurred subsequently but were not recognized in the financial statements.

CERECOR INC.

Notes to Financial Statements (Continued)

As of and for the Years Ended December 31, 2014 and 2013

14. SUBSEQUENT EVENTS (Continued)

In February 2015, the Company entered into an exclusive license agreement with Eli Lilly and Company ("Lilly") pursuant to which Lilly granted the Company rights relating to certain small molecule compounds, which are potent and selective kappa opioid receptor antagonists. In consideration of the license, the Company is required to make an initial payment totaling $1,000,000. Pursuant to the license agreement, the Company paid $750,000 to Lilly within 30 days of the execution of the license, and, upon receipt of certain preclinical data, the Company will pay an additional $250,000. The initial payment of $750,000 will be recorded as research and development expense. Additional payments may be due upon achievement of development and regulatory milestones, including first commercial sale. Upon commercialization, the Company is obligated to pay Lilly milestones and royalties on net sales.

Reverse Stock Split

On June 26, 2015, the Company's board of directors approved a one-for-28 reserve stock split of the Company's Common Stock. As a result of the reverse stock split, (i) each 28 shares of then-outstanding Common Stock was reduced to one share of Common Stock; (ii) the number of shares of Common Stock into which each then-outstanding share of our Series A, A-1 and B Convertible Preferred Stock and our then-outstanding warrants or options to purchase shares of Common Stock are convertible or exercisable into, was proportionately reduced; and (iii) the exercise price of each then-outstanding warrant or option to purchase shares of Common Stock was proportionately increased. Fractional shares resulting from the reverse stock split have been rounded down to the next whole share and in lieu of any fractional shares the Company will pay a cash amount to the holder of such fractional share equal to the fair market value of such fractional share as determined by the Company's board of directors. On September 1, 2015, the Company filed an amendment to its amended and restated certificate of incorporation effecting such reverse stock split. All share and per share amounts of common stock in the accompanying financial statements have been restated for all periods to give retroactive effect to the reverse stock split. The shares of common stock retained a par value of $0.001 per share. Accordingly, the stockholders' deficit reflects the reverse stock split by reclassifying from Common Stock to Additional paid-in capital in an amount equal to the par value of the decreased shares resulting from the reverse stock split.

Amended Certificate of Incorporation

On September 1, 2015, the Company filed an amendment to its amended and restated certificate of incorporation to give effect to the reverse stock split and revised the definition of a Qualified Public Offering so that the Preferred Stock will automatically convert upon the closing of the sale of shares of Common Stock to the public in an underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended.

CERECOR INC.

Balance Sheets

	December 31, 2014	June 30, 2015 (unaudited)	Pro Forma June 30, 2015 (unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 11,742,349	$ 6,142,864	$ 6,142,864
Prepaid expenses and other current assets	360,307	104,357	104,357
Restricted cash—current portion	58,333	58,333	58,333
Total current assets	12,160,989	6,305,554	6,305,554
Restricted cash, net of current portion	117,165	117,165	117,165
Deferred financing costs	—	1,131,699	1,131,699
Property and equipment, net	38,740	27,702	27,702
Total assets	$ 12,316,894	$ 7,582,120	7,582,120
Liabilities, convertible preferred stock and stockholders' (deficit) equity			
Current liabilities:			
Current portion of long term debt, net of discount	$ 1,905,879	$ 3,043,529	$ 3,043,529
Accounts payable	931,139	1,246,546	1,246,546
Accrued expenses and other current liabilities	975,114	1,521,653	1,521,653
Warrant liability	69,684	94,222	—
Investor rights obligation	1,112,000	1,425,201	—
Total current liabilities	4,993,816	7,331,151	5,811,728
Long term debt, net of current portion and discount	5,308,211	4,009,435	4,009,435
Other long term liability	—	84,918	84,918
Total liabilities	10,302,027	11,425,504	9,906,081
Convertible preferred stock:			
Series A—$0.001 par value; 31,116,391 shares authorized, issued and outstanding at December 31, 2014 and June 30, 2015 and no shares issued and outstanding at June 30, 2015 (pro forma) (aggregate liquidation preference of $23,337,293 at June 30, 2015)	10,462,885	10,462,885	—
Series A-1—$0.001 par value; 9,074,511 shares authorized, issued and outstanding at December 31, 2014 and June 30, 2015 and no shares issued and outstanding at June 30, 2015 (pro forma) (aggregate liquidation preference of $6,805,883 at June 30, 2015)	3,389,331	3,389,331	—
Series B—$0.001 par value; 115,000,000 shares authorized at December 31, 2014 and June 30, 2015; 58,948,735 shares issued and outstanding at December 31, 2014 and June 30, 2015 and no shares issued and outstanding at June 30, 2015 (pro forma) (aggregate liquidation preference of $17,678,725 at June 30, 2015)	14,493,315	14,493,315	—
Total convertible preferred stock	28,345,531	28,345,531	—
Stockholders' (deficit) equity:			
Common Stock—$0.001 par value; 230,000,000 shares authorized at December 31, 2014 and June 30, 2015; 649,721 shares issued and outstanding at December 31, 2014 and June 30, 2015 and 230,000,000 shares authorized and 4,630,143 shares issued and outstanding at June 30, 2015 (pro forma)	650	650	4,630
Additional paid-in capital	16,742,063	17,034,276	46,895,250
Accumulated deficit	(43,073,377)	(49,223,841)	(49,223,841)
Total stockholders' deficit	(26,330,664)	(32,188,915)	(2,323,961)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 12,316,894	$ 7,582,120	$ 7,582,120

See accompanying notes to unaudited financial statements.

CERECOR INC.

Unaudited Statements of Operations

	Six Months Ended June 30,	
	2014	2015
Operating expenses:		
Research and development	$ 5,610,764	$ 3,598,606
General and administrative	1,673,573	1,776,817
Loss from operations	(7,284,337)	(5,375,423)
Other income (expense):		
Change in fair value of warrant liability and Investor Rights Obligation	385,990	(337,739)
Interest expense, net	(794,038)	(437,302)
Total other income (expense)	(408,048)	(775,041)
Net loss	$ (7,692,385)	$ (6,150,464)
Net loss per share of common stock, basic and diluted	$ (12.10)	$ (9.47)
Weighted-average shares of Common Stock outstanding, basic and diluted	635,714	649,721
Pro forma net loss per share of Common Stock—basic and diluted		$ (1.33)
Pro forma weighted-average shares of Common Stock outstanding, basic and diluted		4,630,143

See accompanying notes to unaudited financial statements.

CERECOR INC.

Unaudited Statement of Convertible Preferred Stock and Stockholders' Deficit

For the Period from January 1, 2015 to June 30, 2015

	Series A, A-1 and B Convertible Preferred Stock		Stockholders' Deficit				
			Common stock		Additional paid-in capital	Accumulated deficit	Total stockholders' deficit
	Shares	Amount	Shares	Amount			
Balance, January 1, 2015	99,139,637	$ 28,345,531	649,721	$ 650	$ 16,742,063	$ (43,073,377)	$ (26,330,664)
Stock-based compensation	—	—	—	—	292,213	—	292,213
Net Loss	—	—	—	—	—	(6,150,464)	(6,150,464)
Balance, June 30, 2015	99,139,637	$ 28,345,531	649,721	$ 650	$ 17,034,276	$ (49,223,841)	$ (32,188,915)

See accompanying notes to unaudited financial statements.

CERECOR INC.

Unaudited Statements of Cash Flows

	Six Months Ended June 30,	
	2014	2015
Operating activities		
Net loss	$ (7,692,385)	$ (6,150,464)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	13,665	11,038
Stock-based compensation expense	481,303	292,213
Non-cash interest expense	794,627	91,809
Change in fair value of warrant liability and Investor Rights Obligation	(385,990)	337,739
Changes in assets and liabilities:		
Prepaid expenses and other assets	199,663	255,950
Restricted cash	(350)	—
Accounts payable	1,061,356	(3,478)
Accrued expenses and other liabilities	1,077,464	364,958
Net cash used in operating activities	(4,450,657)	(4,800,235)
Financing activities		
Proceeds from issuance of convertible notes	1,250,000	—
Principal payments on venture debt	—	(252,934)
Deferred financing costs	—	(546,316)
Net cash provided by (used in) financing activities	1,250,000	(799,250)
Decrease in cash and cash equivalents	(3,200,647)	(5,599,485)
Cash and cash equivalents at beginning of period	3,421,480	11,742,349
Cash and cash equivalents at end of period	$ 220,833	$ 6,142,864
Supplemental disclosures of cash flow information		
Cash paid for interest	$ —	$ 298,106
Supplemental disclosures of noncash financing activities		
Accrued deferred financing costs	$ 464,863	$ 585,383

See accompanying notes to unaudited financial statements.

CERECOR INC.

Notes to Unaudited Financial Statements

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

1. BUSINESS

Description of Business and Organization

Cerecor Inc. (the "Company" or "Cerecor") was incorporated on January 31, 2011 in Delaware as Ceregen Corporation and subsequently changed the name to Cerecor Inc. in March 2011. The Company is a clinical-stage biopharmaceutical company with the goal of becoming a leader in the development of innovative drugs that make a difference in the lives of patients with neurological and psychiatric disorders. The Company's operations since inception have been limited to organizing and staffing the Company, acquiring rights to and developing certain product candidates and its product platform, business planning and raising capital.

Liquidity

The Company's financial statements have been prepared on a going-concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. Accordingly, the financial statements do not include any adjustments that might be necessary should the Company be unable to continue to fund its operations. The Company has not generated any product revenues and has not yet achieved profitable operations. There is no assurance that profitable operations will ever be achieved, and if achieved, could be sustained on a continuing basis.

The Company has incurred recurring operating losses since inception. For the six months ended June 30, 2015, the Company incurred a net loss of $6,150,464 and generated negative cash flows from operations of $4,800,235. As of June 30, 2015, the Company had an accumulated deficit of $49,223,841. The Company anticipates operating losses to continue for the foreseeable future due to, among other things, costs related to the clinical development of its product candidates, its product platform, its preclinical programs, business development and the development of its administrative organization. The Company will require substantial additional financing to fund its operations and to continue to execute its strategy. To fully execute its business plan, the Company will need to complete certain research and development activities, have positive clinical trial results and obtain marketing approval for its product candidates, which may span many years, and may ultimately be unsuccessful. Any delays in completing these activities or negative clinical trial results could adversely impact the Company. The Company plans to meet its capital requirements primarily through a combination of equity and debt financings, collaborations, strategic alliances and marketing distribution or licensing arrangements and in the longer term, revenue from product sales to the extent its product candidates receive marketing approval and are commercialized. There can be no assurance, however, that the Company will be successful in obtaining financing at the level needed to sustain operations and develop its product candidates or on terms acceptable to the Company, or that the Company will obtain approvals necessary to market its products or achieve profitability or sustainable, positive cash flow. The Company currently anticipates that its cash and cash equivalents will be sufficient to meet its anticipated cash requirements through at least the end of the third quarter of 2015. These factors raise significant doubt about the Company's ability to continue as a going concern.

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

2. SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The Company's unaudited financial statements have been prepared in accordance with U. S. generally accepted accounting principles ("GAAP"). In the opinion of management, the accompanying unaudited financial statements include all adjustments, consisting of normal recurring adjustments, which are necessary to present fairly the Company's financial position, results of operations and cash flows. The balance sheet at December 31, 2014 has been derived from audited financial statements at that date. The interim results of operations are not necessarily indicative of the results that may occur for the full fiscal year. Certain information and footnote disclosure normally included in the financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to instructions, rules and regulations prescribed by the United States Securities and Exchange Commission ("SEC"). The Company believes that the disclosures provided herein are adequate to make the information presented not misleading when these unaudited financial statements are read in conjunction with the December 31, 2014 audited financial statements.

Unaudited Pro Forma Presentation

On December 17, 2013, the Company's board of directors authorized management of the Company to confidentially submit a registration statement to the SEC for the Company to sell shares of its Common Stock (the "Common Stock") to the public. The unaudited pro forma balance sheet information as of June 30, 2015 assumes the conversion of all outstanding shares of the Company's Series A Convertible Preferred Stock, Series A-1 Convertible Preferred Stock and Series B Convertible Preferred Stock (collectively, "Preferred Stock") as of that date into shares of the Company's Common Stock in connection with a qualified initial public offering ("IPO") (see Note 8). The unaudited pro forma net loss per share is computed using the weighted-average number of shares of Common Stock outstanding and gives effect to the automatic conversion of all outstanding shares of the Company's Preferred Stock into an aggregate of 3,980,422 shares of the Company's Common Stock as of January 1, 2015 or the date of original issuance, if later.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses, other comprehensive income and related disclosures. On an ongoing basis, management evaluates its estimates, including estimates related to clinical trial accruals, Investor Rights Obligation (see Note 8), and warrant liability. The Company bases its estimates on historical experience and other market-specific or other relevant assumptions that it believes to be reasonable under the circumstances. Actual results may differ from those estimates or assumptions.

In addition, the Company utilizes estimates and assumptions in determining the fair value of its Common Stock. The Company granted stock options at exercise prices not less than the fair value of its Common Stock as determined by the board of directors, with input from management. Management uses the assistance of a third-party valuation firm in estimating the fair value of the Common Stock. The board of directors has determined the estimated fair value of the Common Stock based on a number of objective and subjective factors, including external market conditions affecting the

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

biotechnology industry sector and the historic prices at which the Company sold shares of its Preferred Stock.

Deferred Offering Costs

The Company capitalizes certain legal, accounting and other third-party fees that are directly associated with in-process equity financings as deferred offering costs (non-current) until such financings are consummated. After consummation of the equity financing, these costs are recorded in stockholders' equity (deficit) as a reduction of additional paid-in capital generated as a result of the offering. Should the equity financing for which those costs relate no longer be considered probable of being consummated, all deferred offering costs will be charged to operating expenses in the statement of operations at such time. The Company has incurred and deferred offering costs of $1,131,699 during the six months ended June 30, 2015. We will incur additional offering costs during the third quarter in anticipation of an initial public offering.

Net Loss Per Share of Common Stock, Basic and Diluted

Basic net loss per share of Common Stock is computed by dividing net loss by the weighted-average number of shares of Common Stock outstanding during the period, excluding the dilutive effects of Preferred Stock, Investor Rights Obligation, warrants on Preferred Stock and Common Stock, stock options and unvested restricted stock. Diluted net loss per share of Common Stock is computed by dividing the net loss by the sum of the weighted-average number of shares of Common Stock outstanding during the period plus the potential dilutive effects of warrants on Common Stock, stock options and unvested restricted stock outstanding during the period calculated in accordance with the treasury stock method, although these shares and options are excluded if their effect is anti-dilutive. In addition, the Company analyzes the potential dilutive effect of the outstanding Preferred Stock, Investor Rights Obligation, and warrants on Preferred Stock under the "if-converted" method when calculating diluted earnings per share, in which it is assumed that the outstanding security converts into Common Stock at the beginning of the period. Because the impact of these items is anti-dilutive during periods of net loss, there was no difference between basic and diluted net loss per share of Common Stock for the six months ended June 30, 2014 and 2015.

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

The following outstanding securities at June 30, 2014 and 2015 have been excluded from the computation of diluted weighted shares outstanding, as they would have been anti-dilutive:

	June 30, 2014	June 30, 2015
Series A Convertible Preferred Stock	31,116,391	31,116,391
Series A-1 Convertible Preferred Stock	9,074,511	9,074,511
Series B Convertible Preferred Stock	—	58,948,735
Common Stock dividends on Series A-1 Convertible Preferred Stock	6,861	—
Unvested restricted stock	7,142	—
Stock options	425,263	510,884
Warrants on Common Stock	661,673	657,474
Warrants on Preferred Stock	—	625,208
Investor Rights Obligation	—	53,351,117

Income Taxes

The Company accounts for income taxes under the asset and liability method in accordance with ASC 740, *Income Taxes* ("ASC 740"). Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. The portion of any deferred tax asset for which it is more likely than not that a tax benefit will not be realized must then be offset by recording a valuation allowance. A full valuation allowance has been established against all of the deferred tax assets as it is more likely than not that these assets will not be realized given the Company's history of operating losses. The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not to be sustained upon examination based on the technical merits of the position. The amount for which an exposure exists is measured as the largest amount of benefit determined on a cumulative probability basis that the Company believes is more likely than not to be realized upon ultimate settlement of the position.

The Company's policy is to record interest and penalties on uncertain tax positions as income tax expense. As of June 30, 2015, the Company does not believe any material uncertain tax positions are present.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2014-09, *Revenue From Contracts With Customers* ("ASU 2014-09"). Pursuant to this update an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The amendments in this update are currently effective for annual reporting periods beginning after December 15, 2016, including interim periods within that

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

reporting period and are to be applied retrospectively, or on a modified retrospective basis. Early application is not permitted. In July 2015, the FASB approved a one-year deferral of the effective date for annual reporting periods beginning after December 15, 2017 with early adoption permitted for annual reporting periods beginning after December 15, 2016.

In August 2014, the FASB issued ASU No. 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern.* The amendments in this update will explicitly require a company's management to assess an entity's ability to continue as a going concern, and to provide related footnote disclosures in certain circumstances. The new standard will be effective in the first annual period ending after December 15, 2016. Early application is permitted. The Company is currently evaluating the potential impact of the adoption of this standard, but believes its adoption will have no impact on its financial position, results of operations or cash flows.

In April 2015, the FASB issued ASU No. 2015-03, *Simplifying the Presentation of Debt Issuance Costs.* The guidance requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount. The standard also aligns the GAAP presentation with International Financial Reporting Standards and will remedy the long-standing conflict with the guidance in FASB Concepts Statement No. 6, *Elements of Financial Statements,* which indicates that debt issuance costs do not meet the definition of an asset, because they provide no future economic benefit. The standard is effective for financial statements issued for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years. Early adoption is permitted for financial statements that have not been previously issued. The new guidance will be applied on a retrospective basis. The adoption of this guidance during the six months ended June 30, 2015 did not have a material impact on the Company's balance sheets.

3. FAIR VALUE MEASUREMENTS

ASC 820, *Fair Value Measurements and Disclosures* ("ASC 820"), defines fair value as the price that would be received to sell an asset, or paid to transfer a liability, in the principal or most advantageous market in an orderly transaction between market participants on the measurement date. The fair value standard also establishes a three-level hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability on the measurement date. The three levels are defined as follows:

- Level 1—inputs to the valuation methodology are quoted prices (unadjusted) for an identical asset or liability in an active market.
- Level 2—inputs to the valuation methodology include quoted prices for a similar asset or liability in an active market or model-derived valuations in which all significant inputs are observable for substantially the full term of the asset or liability.
- Level 3—inputs to the valuation methodology are unobservable and significant to the fair value measurement of the asset or liability.

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

3. FAIR VALUE MEASUREMENTS (Continued)

At December 31, 2014 and June 30, 2015, the Company's financial instruments included cash and cash equivalents, restricted cash, accounts payable, accrued expenses and other current liabilities, long term debt, Warrant Liability and the Investor Rights Obligation. The carrying amounts reported in the accompanying financial statements for cash and cash equivalents, restricted cash, accounts payable, and accrued expenses and other current liabilities approximate their respective fair values because of the short-term nature of these accounts. The estimated fair value of the Company's debt of $7.0 million as of June 30, 2015 was based on current interest rates for similar types of borrowings and is in Level Two of the fair value hierarchy.

The following table presents, for each of the fair value hierarchy levels required under ASC 820, the Company's assets and liabilities that are measured at fair value on a recurring basis:

	December 31, 2014 Fair Value Measurements Using		
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets			
Investments in money market funds*	$ 11,251,724	$ —	$ —
Liabilities			
Investor Rights Obligation	$ —	$ —	$ 1,112,000
Warrant Liability	$ —	$ —	$ 69,684

	June 30, 2015 Fair Value Measurements Using		
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets			
Investments in money market funds*	$ 5,773,250	$ —	$ —
Liabilities			
Investor Rights Obligation	$ —	$ —	$ 1,425,201
Warrant Liability	$ —	$ —	$ 94,222

* Investments in money market funds are reflected in cash and cash equivalents on the accompanying Balance Sheets.

Level 3 Valuation

The Warrant Liability (which relates to warrants to purchase shares of Series B Convertible Preferred Stock) is marked-to-market each reporting period with the change in fair value recorded to

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

3. FAIR VALUE MEASUREMENTS (Continued)

other income (expense) in the Statements of Operations until the warrants are exercised, expire or other facts and circumstances lead the Warrant Liability to be reclassified to stockholders' equity. The fair value of the Warrant Liability is estimated using a Black-Scholes Option Pricing Model. The significant assumptions used in preparing the option pricing model for valuing the Warrant Liability as of December 31, 2014 include (i) volatility of 60.0%, (ii) risk free interest rate of 2.1%, (iii) strike price ($0.2999), (iv) fair value of Series B Convertible Preferred Stock ($0.18), and (v) expected life of 8.23 years. The significant assumptions used in preparing the option pricing model for valuing the Warrant Liability as of June 30, 2015 include (i) volatility of 70.0%, (ii) risk free interest rate of 1.85%, (iii) strike price ($0.2999), (iv) fair value of Series B Convertible Preferred Stock ($0.21), and (v) expected life of 6.0 years. Significant decreases in the Company's stock price volatility will significantly decrease the overall valuation of the Company's warrant liability, while significant increases in the Company's stock price volatility will significantly increase the overall valuation.

The Investor Rights Obligation will expire at the earlier of (i) an IPO, (ii) a deemed liquidation event, or (iii) June 30, 2017. While outstanding, the Investor Rights Obligation is remeasured at each reporting period and changes in fair value are recorded as a component of other income (expense) in the Company's Statement of Operations. The fair value of the Investor Rights Obligation was determined using a valuation model, which considers the probability of achieving certain milestones, the entity's cost of capital, the estimated period the rights will be outstanding, consideration received for the instrument with the rights, the number of shares to be issued to satisfy the rights, the price of such shares and any changes in the fair value of the underlying instrument. The significant assumptions used in preparing the option pricing model for valuing the Company's Investor Rights Obligation as of December 31, 2014 include (i) volatility (60.0%), (ii) risk free interest rate ranging from 0.05% to 0.63%, (iii) strike price ($0.2999), (iv) fair value of Preferred Stock ranging from $0.00 to $0.18, and (v) expected life ranging from 0.5 to 1.75 years. The significant assumptions used in preparing the option pricing model for valuing the Company's Investor Rights Obligation as of June 30, 2015 include (i) volatility of 70%, (ii) risk free interest rate ranging from 0.03% to 0.40%, (iii) strike price ($0.2999), (iv) fair value of Preferred Stock ranging from $0.09 to $0.29, and (v) expected life ranging from 0.27 to 1.25 years. Significant decreases in the the price per share of the Company's Series B Convertible Preferred Stock and stock price volatility will significantly decrease the overall valuation of its Investor Rights Obligation, while significant increases will significantly increase the overall valuation.

The table presented below is a summary of changes in the fair value of the Company's Level 3 valuation for the Warrant Liability and the Investor Rights Obligation for the six months ended June 30, 2015:

	Warrant Liability	Investor Rights Obligation	Total
Balance at December 31, 2014	$ 69,684	$ 1,112,000	$ 1,181,684
Change in fair value	24,538	313,201	337,739
Balance at June 30, 2015	$ 94,222	$ 1,425,201	$ 1,519,423

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

3. FAIR VALUE MEASUREMENTS (Continued)

No other changes in valuation techniques or inputs occurred during the six months ended June 30, 2014 and 2015. No transfers of assets between Level 1 and Level 2 of the fair value measurement hierarchy occurred during the six months ended June 30, 2014 and 2015.

4. DEFERRED FINANCING COSTS

Deferred financing costs incurred in preparation for an IPO consisted of the following:

	December 31, 2014	June 30, 2015
Legal fees	$ 525,414	$ 629,230
Accounting fees	435,410	392,950
Printing costs	103,282	109,519
Expense upon determination that consummation of offering is not probable	(1,064,106)	—
Total deferred financing costs	$ —	$ 1,131,699

5. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities consisted of the following:

	December 31, 2014	June 30, 2015
Compensation and benefits	$ 129,450	$ 276,492
Research and development expenses	598,883	717,322
General and administrative	159,045	479,828
Accrued interest	87,736	48,011
Total accrued expenses and other current liabilities	$ 975,114	$ 1,521,653

6. ASSET ACQUISITION AND LICENSE AGREEMENTS

In February 2015, the Company acquired rights to CERC-501, which was previously referred to as OpRA Kappa, through an exclusive, worldwide license from Eli Lilly and Company. CERC-501 is a high-binding, selective Kappa opioid receptor ("KOR") antagonist. Pursuant to the license agreement, the Company paid $750,000 to Lilly within 30 days of the execution of the license agreement, which was recorded as research and development expense in the accompanying unaudited Statement of Operations for the six months ended June 30, 2015. Upon the Company undertaking a 9-month toxicology study in non-human primates and delivering a final study report, the Company will be required to pay Lilly an additional $250,000. During the three months ended June 30, 2015, the Company determined that it would undertake this study and, as a result, the Company accrued $250,000. Additional payments may be due upon achievement of development and regulatory milestones, including the first commercial sale. Upon commercialization, the Company is obligated to pay Lilly milestones and royalties on net sales.

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

6. ASSET ACQUISITION AND LICENSE AGREEMENTS (Continued)

For the first KOR product the Company develops, the Company is required to make milestone payments in an amount not to exceed, in the aggregate, $19,000,000 upon the achievement of various development and regulatory milestones, including first commercial sale. Additionally, the Company will be required to make sales milestone payments in an amount not to exceed $30,000,000. Upon commercialization of a KOR product, we will pay Eli Lilly a tiered royalty percentage on net sales of a KOR product from mid-single digits to low-double digits. The royalty obligation will be on a product by product and country by country basis until the later of (i) the expiration of the last to expire valid patent claim of a patent licensed to us under the license agreement covering the KOR product in such country, or (ii) eleven years from the first commercial sale of the KOR product in such country.

The Company accounted for this transaction as an asset acquisition because it only acquired the assigned rights and technology and did not acquire any processes or activities.

7. DEBT

Debt consisted of the following:

	December 31, 2014	June 30, 2015
Term loan	$ 7,500,000	$ 7,247,065
Less: debt discount	(285,910)	(194,101)
Term Loan, net of debt discount	7,214,090	7,052,964
Less: current portion, net of debt discount	(1,905,879)	(3,043,529)
Long term debt, net of current portion and debt discount	$ 5,308,211	$ 4,009,435

Term Loan

In August 2014, the Company received a $7,500,000 secured term loan from a finance company. The loan is secured by a lien on all of the Company's assets, excluding intellectual property, which was subject to a negative pledge. The loan contains certain additional nonfinancial covenants. In connection with the loan agreement, the Company's cash and investment accounts are subject to account control agreements with the finance company that give the finance company the right to assume control of the accounts in the event of a loan default. Loan defaults are defined in the loan agreement and include, among others, the finance company's determination that there is a material adverse change in the Company's operations. Interest on the loan is at a rate of the greater of 7.95%, or 7.95% plus the prime rate as reported in The Wall Street Journal minus 3.25%. The current interest rate is 7.95%. The loan was interest-only for nine months, and is repayable in equal monthly payments of principal and interest of $304,278 over 27 months beginning in June 2015. Interest expense, which includes amortization of discount and the accrual of a termination fee, was approximately $437,000 for the six months ended June 30, 2015 in the accompanying unaudited Statement of Operations.

In connection with the term loan, the Company issued a warrant to purchase 625,208 shares of Series B Convertible Preferred Stock at an exercise price of $0.2999 per share that is exercisable for a period ending upon the earlier of ten years from the date of issuance and five years following an IPO.

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

7. DEBT (Continued)

Upon the closing of an initial public offering, these warrants will become a warrant to purchase 22,328 shares of Common Stock at an exercise price of $8.40, in accordance with its terms. The Company's warrant to purchase shares of Series B Convertible Preferred Stock represented a freestanding financial instrument that was indexed to an obligation of the Company to repurchase its Series B Convertible Preferred Stock by transferring assets and, therefore, met the criteria to be classified as a liability under FASB ASC 480, *Distinguishing Liabilities from Equity*. The Company records the warrant liability at its fair value using the Black-Scholes option pricing model and revalues the warrant at each reporting date (see Note 3).

Convertible Promissory Notes

From April through June 2014, the Company entered into several convertible promissory notes for aggregate proceeds of $1.25 million. The loans bore interest at an annual rate of 6.0% and were to mature within 12 months from their issuance date. In the event that the Company completed a qualified equity offering that generated aggregate proceeds of at least $10 million, the notes would automatically convert into the shares issued in connection with the qualified equity offering and at a conversion price equal to 75% of the qualified equity offering price. In the event that an equity offering did not occur by the maturity date, all interest and principal would have become due. The notes converted on July 11, 2014 when the Series B Convertible Preferred Stock equity offering was completed. The principal amount of the notes, and interest of $9,016, was converted at 75% of the Series B Convertible Preferred Stock original issuance price, or $0.22492 per share, and the Company issued 5,597,618 shares of Series B Convertible Preferred Stock.

In connection with issuing the notes, the holders received warrants to purchase 148,854 shares of the Company's Common Stock. The warrants are exercisable at the option of the holder at any time during their five-year term at a price per share at which equity securities are sold in a qualified financing event or offered to the public in the event of an IPO. Upon completing the Series B Convertible Preferred Stock equity offering on July 11, 2014, a qualified financing event occurred and the holders are eligible to exercise their warrants, at any time through their five-year terms, at an exercise price of $8.40 per share. In the event of an IPO, change in control or capital restructuring, as set forth in the warrant, the Company will provide the holders of the warrants notification of such events to afford the holders the ability to exercise their warrants prior to the event. If the holder does not exercise the warrant, then the warrants shall expire in accordance with their terms. The exercise price of the warrants does not contain "down round" protection provisions.

Due to the variable exercise price and number of shares underlying the warrant prior to the completion of the qualified financing, the warrants were originally classified as liabilities and subject to derivative accounting. On July 11, 2014, the exercise price and number of shares underlying the warrant were fixed and the warrants were reclassified to permanent equity. At the time of the reclassification, the warrants had a fair value of $379,000.

Demand Notes

On July 3, 2014, the Company issued $999,666 in demand notes that were converted on July 11, 2014 upon completing the Series B Convertible Preferred Stock equity offering. The demand note

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

7. DEBT (Continued)

holders were the majority participants in the Series B Convertible Preferred Stock equity offering. The purpose of the notes were to provide short term financing between the targeted closing date of Series B Convertible Preferred Stock equity offering, July 3, 2014, and the actual closing date of July 11, 2014. The demand notes converted at the original issuance price of Series B Convertible Preferred Stock of $0.2999 per share, and the holders received 3,333,331 shares of Series B Convertible Preferred Stock (see Note 8). Interest at 0.31% was not paid due to the short term that the notes were outstanding.

8. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT

At June 30, 2015, the Company was authorized to issue two classes of stock, Common Stock and Preferred Stock. The total number of shares of capital stock the Company was authorized to issue was 163,405,187 of which 8,214,285 was Common Stock and 155,190,902 was Preferred Stock. All shares of Common and Preferred Stock have a par value of $0.001 per share. 31,116,391 of the authorized shares of Preferred Stock are designated as Series A Convertible Preferred Stock, 9,074,511 of the authorized shares of Preferred Stock are designated as Series A-1 Convertible Preferred Stock and the remaining 115,000,000 shares have been designated as Series B Convertible Preferred Stock.

Each share of Series A Convertible Preferred Stock will be convertible into 0.04464 shares of Common Stock, each share of Series A-1 Convertible Preferred Stock will be convertible into 0.05357 shares of Common Stock and each share of Series B Convertible Preferred Stock will be convertible into 0.03571 share of Common Stock, subject to certain anti-dilution protections, at the option of the holder. Each share of Preferred Stock will automatically convert upon (i) the closing of the sale of shares of Common Stock in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act, resulting in at least $45.0 million of gross proceeds to the Company (a "qualified initial public offering"), or (ii) the occurrence of an event, specified by a vote or written consent of the holders of a majority of the then outstanding shares of Preferred Stock. As of June 30, 2015, the Preferred Stock is convertible into 3,980,422 shares of Common Stock.

The Preferred Stock is subject to redemption under certain "deemed liquidation" events, as defined, and as such, the Preferred Stock is considered contingently redeemable for accounting purposes. Accordingly, the Preferred Stock has been recorded within temporary equity in the financial statements. The Company has not adjusted the Preferred Stock to its redemption amount at each reporting period, as the redemption of such Preferred Stock is not deemed probable of occurrence during the periods presented. The redemption of the Preferred Stock is not considered probable as the redemption is contingent on the occurrence of such "deemed liquidation" events, which include (i) the acquisition of the Company by another entity by means of any transaction or a series of related transactions, unless the existing stockholders of the Company continue to hold at least 50% of the voting power of the surviving or acquiring entity after such transaction; and (ii) a sale of all or substantially all of the assets of the Company. The Company has concluded that none of these events are probable during the periods presented.

Since the issuance of Series B Convertible Preferred Stock, all series of Preferred Stock are entitled to a non-cumulative annual dividend of 8.0%. Dividends are paid when, as, and if declared by the board of directors. In the event of any liquidation, dissolution or winding up of the Company prior

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

8. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

to the conversion, the holders of the Preferred Stock will be entitled to a liquidation preference in pari passu before any liquidation preference payments are made to the Common shareholders. The liquidation preference payment is equal to the greater of (i) original issuance plus any declared but unpaid dividends, or (ii) the amount that a Preferred holder would have been entitled to receive if they had converted to common immediately prior to liquidation.

Series B Convertible Preferred Stock Transaction

On July 11, 2014, the Company completed an initial closing of an equity offering for shares of its Series B Convertible Preferred Stock and on August 19, 2014 completed a second closing. Pursuant to the terms of the agreement, the Company issued an aggregate of 50,017,786 shares of Series B Convertible Preferred Stock at an original issuance price of $0.2999 per share for gross proceeds of $15,000,000.

In addition, and pursuant to the terms of, several convertible promissory notes issued from April through June 2014, the Company issued 5,597,618 shares of Series B Convertible Preferred Stock upon the conversion of the outstanding principal and interest due under the convertible promissory notes in the aggregate amount of $1,259,016. The conversion price for the convertible promissory notes was equal to $0.22492, or 75% of the original issuance price of the Series B Convertible Preferred Stock. The demand notes issued in July 2014, with an aggregate principal balance of $996,666, was converted into 3,333,331 shares of Series B Convertible Preferred Stock at a conversion price of $0.2999 per share. See Note 7 for additional information regarding the terms and provisions of the convertible promissory notes and demand notes.

The second closing of the Series B Convertible Preferred Stock equity offering was with the term loan lender. Pursuant to the same terms and conditions of the initial offering, the Company issued 3,334,445 shares of Series B Convertible Preferred Stock to the term loan lender at an original issuance price of $0.2999 per share, for gross proceeds of $1,000,000, which is included in the $15,000,000 described above.

The right of the investors (the "Investor Rights Obligation") to purchase Series B Convertible Preferred Stock represented a freestanding financial instrument and was indexed to an obligation of the Company to repurchase its Series B Convertible Preferred Stock by transferring assets. As such, the Company accounted for the Investor Rights Obligation as a liability in accordance with FASB ASC 480. The Company adjusted the carrying value of the liability to its estimated fair value at each reporting date (see Note 3).

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

8. CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT (Continued)

Common Stock Warrants

At June 30, 2015, the following Common Stock warrants were outstanding (all of which are accounted for as equity instruments):

Number of shares underlying warrants	Exercise price per share	Expiration Date
109,976	$ 28.00	February 2017
29,260	$ 14.00	February 2017
90,529	$ 28.00	March 2017
29,557	$ 14.00	March 2017
130,233	$ 28.00	April 2017
14,284	$ 28.00	July 2017
80,966	$ 28.00	August 2018
3,571	$ 28.00	December 2018
59,542	$ 8.40	April 2019*
23,816	$ 8.40	May 2019*
65,497	$ 8.40	June 2019*
17,863	$ 8.40	July 2019*
2,380	$ 8.68	May 2022
657,474		

* each of these warrants will expire upon the closing of an initial public offering, if sooner, in accordance with their terms.

On June 12, 2015, the Company and Maxim Partners LLC ("Maxim") entered into an agreement to terminate a warrant to purchase 24,306 shares of Common Stock at an exercise price of $21.00 per share. The cancellation of the warrant was effective immediately without any consideration due to Maxim.

Series B Convertible Preferred Stock Warrants

In August 2014, a warrant to purchase 625,208 shares of Series B Convertible Preferred Stock, at an exercise price equal to $0.2999 per share, was issued to the term loan lender in conjunction with the loan of $7.5 million (see Note 7). The fair value was calculated at $115,056 using a Black-Scholes pricing model using a fair market value of $0.25 per share for its Series B Convertible Preferred Stock.

9. STOCK-BASED COMPENSATION

2011 Stock Incentive Plan

On April 28, 2011, the board of directors adopted the 2011 Stock Incentive Plan (the "Plan") reserving and authorizing up to 178,571 shares of Common Stock for stock-based compensation awards to attract, retain and reward eligible employees, consultants, and non-employee directors. The options have a contractual term of ten years. Generally, the options vest annually over three or four years, as

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

9. STOCK-BASED COMPENSATION (Continued)

determined by the board of directors, upon each option grant, although certain option grants in 2014 were fully vested on the grant date. On January 10, 2012, the board of directors and stockholders of the Company approved an amendment to the Plan authorizing an increase in the aggregate number of shares reserved for issuance under the Plan from 178,571 to 285,714 shares of Common Stock. On May 6, 2013, the board of directors approved an amendment to the Plan authorizing an increase in the aggregate number of shares reserved for issuance under the Plan from 285,714 to 704,428 shares of Common Stock. As of June 30, 2015, there were 254,236 shares remaining under the Plan available for future issuance.

On May 8, 2012, the board of directors approved three grants of non-qualified stock options outside of the Plan aggregating 167,857 to the President and Chief Executive Officer and two non-employee directors of the Company at $8.68 per share, one-third vesting on three consecutive annual anniversaries.

The estimated grant date fair market value of the Company's stock-based awards is amortized ratably over the awards' service periods. Stock- based compensation expense recognized was as follows:

	Six Months Ended June 30, 2014	Six Months Ended June 30, 2015
Research and development	$ 78,194	$ 43,367
General and administrative	403,109	248,846
Total stock-based compensation	$ 481,303	$ 292,213

A summary of option activity is as follows:

	Options Outstanding			
	Number of Shares	Weighted-Average Exercise Price	Fair Value Of Options Granted	Weighted Average Remaining Contractual Term (in years)
Balance, December 31, 2014	552,726	$ 9.17		8.17
Granted	72,856	$ 6.22	$ 211,262	
Forfeitures	(114,698)	$ 8.59		
Balance, June 30, 2015	510,884	$ 8.88		7.39
Vested or expected to vest at June 30, 2015	510,884	$ 8.88		7.39
Exercisable at June 30, 2015	439,607	$ 9.26		7.54

CERECOR INC.

Notes to Unaudited Financial Statements (Continued)

As of December 31, 2014 and June 30, 2015 and for the Six Months Ended June 30, 2014 and 2015

9. STOCK-BASED COMPENSATION (Continued)

As of June 30, 2015, there was $0.2 million of total unrecognized compensation expense, related to unvested options granted under the Plan, unvested options granted outside of the Plan, and restricted stock to be recognized as follows:

Year ending December 31,	
*2015	$ 48,108
2016	57,419
2017	45,932
2018	42,495
2019	14,113
Total	$ 208,067

* Six months remaining in 2015

10. SUBSEQUENT EVENTS

Reverse Stock Split

On June 26, 2015, the Company's board of directors approved a one-for-28 reserve stock split of the Company's Common Stock. As a result of the reverse stock split, (i) each 28 shares of then-outstanding Common Stock was reduced to one share of Common Stock; (ii) the number of shares of Common Stock into which each then-outstanding share of our Series A, A-1 and B Convertible Preferred Stock and our then-outstanding warrants or options to purchase shares of Common Stock are convertible or exercisable into, was proportionately reduced; and (iii) the exercise price of each then-outstanding warrant or option to purchase shares of Common Stock was proportionately increased. Fractional shares resulting from the reverse stock split have been rounded down to the next whole share and in lieu of any fractional shares the Company will pay a cash amount to the holder of such fractional share equal to the fair market value of such fractional share as determined by the Company's board of directors. On September 1, 2015, the Company filed an amendment to its amended and restated certificate of incorporation effecting such reverse stock split. All share and per share amounts of common stock in the accompanying financial statements have been restated for all periods to give retroactive effect to the reverse stock split. The shares of common stock retained a par value of $0.001 per share. Accordingly, the stockholders' deficit reflects the reverse stock split by reclassifying from Common Stock to Additional Paid-In Capital in an amount equal to the par value of the decreased shares resulting from the reverse stock split.

Amended Certificate of Incorporation

On September 1, 2015, the Company filed an amendment to its amended and restated certificate of incorporation to give effect to the reverse stock split and revised the definition of a Qualified Public Offering so that the Preferred Stock will automatically convert upon the closing of the sale of shares of Common Stock to the public in an underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended.

4,230,769 Shares

Common Stock

PROSPECTUS

, 2015

Maxim Group LLC

Laidlaw & Company (UK) Ltd.

Through and including , 2015 (25 days after the commencement of this offering), all dealers that buy, sell or trade shares of our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by the registrant. All amounts are estimates except the Securities and Exchange Commission registration fee, Financial Industry Regulatory Authority, Inc. filing fee and the listing fee for the NASDAQ Capital Market.

	Amount
Securities and Exchange Commission registration fee	$ 3,675
Financial Industry Regulatory Authority, Inc. filing fee	5,244
NASDAQ Capital Market initial listing fee	50,000
Accountants' fees and expenses	850,000
Legal fees and expenses	900,000
Transfer Agent's fees and expenses	5,000
Printing and engraving expenses	250,000
Miscellaneous	150,000
Total Expenses	$ 2,213,919

The expense amounts set forth above are treated as deferred offering costs and will be deferred until this offering is completed. The amount excludes $1.1 million of expenses that have been incurred and not deferred, but rather expensed, in 2014 because we had determined that this offering was no longer probable of being consummated at such time.

Item 14. Indemnification of Directors and Officers.

We are incorporated under the laws of the State of Delaware. Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of its directors or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty to the corporation or its stockholders, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock purchase or redemption in violation of Delaware corporate law or derived an improper personal benefit. Our amended and restated certificate of incorporation that will be effective upon the closing of this offering provides that no director shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the Delaware General Corporation Law prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he or she is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with

respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnify for such expenses which the Court of Chancery or such other court shall deem proper.

Our amended and restated certificate of incorporation that will be effective upon the closing of the offering provides that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding whether civil, criminal, administrative or investigative (other than an action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, our director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful.

Our amended and restated certificate of incorporation that will be effective upon the closing of the offering also provides that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, our director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee or, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred by him or her or on his or her behalf in connection therewith. If we do not assume the defense, expenses must be advanced to an Indemnitee under certain circumstances.

In addition, we expect to enter into indemnification agreements with our current directors and officers containing provisions which are in some respects broader than the specific indemnification provisions contained in the Delaware general Corporation Law. The indemnification agreements require us, among other things, to indemnify our directors against certain liabilities that may arise by reason of their status or service as directors and to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified.

We maintain a general liability insurance policy that covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers.

The underwriting agreement we will enter into in connection with the offering of common stock being registered hereby provides that the underwriters will indemnify, under certain conditions, our directors and officers (as well as certain other persons) against certain liabilities arising in connection with such offering.

Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding shares of common stock and preferred stock issued, and options granted, by us within the past three years that were not registered under the Securities Act of 1933, as amended (the "Securities Act"). Also included is the consideration, if any, received by us for such shares and options and information relating to the section of the Securities Act, or rule of the Securities and Exchange Commission, under which exemption from registration was claimed.

(a) Issuances of Securities

In September 2014, we issued a warrant to purchase 2,380 shares of our common stock to a member of our board of directors in consideration for his past services to the Company.

In August 2014, we entered into a $7.5 million secured term loan facility and in connection with such loan we issued the lender a warrant to purchase 625,208 shares of Series B preferred stock at an exercise price of $0.2999 per share. Upon the closing of this offering, in accordance with their terms, the warrants will automatically become exercisable for 22,328 shares of common stock at an exercise price of $8.40 per share of common stock.

In August 2014, we issued and sold to an investor at a purchase price of $0.2999 per share an aggregate of 3,334,445 shares of our Series B convertible preferred stock for an aggregate purchase price of $1.0 million.

In July 2014, we issued and sold to investors at a purchase price of $0.2999 per share an aggregate of 55,614,290 shares of our Series B convertible preferred stock for an aggregate consideration of $14,000,334 in cash and $2,258,682 in aggregate principal and interest due under convertible promissory notes held by existing investors.

In July 2014, we issued convertible demand promissory notes to investors in an aggregate principal amount of $1.0 million. In July 2014, the convertible promissory notes converted into shares of Series B convertible preferred stock in accordance with the terms of such notes.

In July 2014, we issued a warrant to purchase 17,863 shares of our common stock to a consulting firm in partial consideration for advisory services.

From April 2014 through June 2014, we issued convertible promissory notes, to investors in an aggregate principal amount of $1,250,000. In connection with the issuance of these notes, we issued warrants to purchase 148,854 shares our common stock. In July 2014, the convertible promissory notes converted into shares of Series B convertible preferred stock in accordance with the terms of such notes.

In December 2013, we issued a warrant to purchase 3,571 shares of our common stock to a consulting firm in partial consideration for the consulting services in connection with identifying commercial opportunities.

In August 2013, we issued and sold to investors at a purchase price of $0.75 per unit an aggregate of 9,074,511 shares of our Series A-1 convertible preferred stock and warrants to purchase 80,966 shares of our common stock for an aggregate purchase price of $6.8 million.

In August 2013, in connection with the sale of the Series A-1 convertible preferred stock, we issued a warrant to purchase 24,306 shares of our common stock to the placement agent in such offering.

In May 2012, we issued and sold to investors at a purchase price of $0.75 per unit an aggregate of 1,600,000 shares of our Series A convertible preferred stock and warrants to purchase 14,285 shares of our common stock for an aggregate purchase price of $1.2 million.

In April 2012, we issued and sold to investors at a purchase price of $0.75 per unit an aggregate of 464,000 shares of our Series A convertible preferred stock and warrants to purchase 4,142 shares of our common stock for an aggregate purchase price of $348,000.

In April 2012, in connection with the sale of the Series A convertible preferred stock, we issued a warrant to purchase 126,091 shares of our common stock to the placement agent in such offerings.

In March 2012, we issued and sold to investors at a purchase price of $0.75 per unit an aggregate of 12,854,643 shares of our Series A convertible preferred stock and warrants to purchase 114,773 shares of our common stock for an aggregate purchase price of $9.6 million. We also issued 4,077,475 shares of our Series A convertible preferred stock and a warrant to purchase 36,406 shares of our common stock upon the conversion of the convertible demand promissory note issued in April 2011.

In February 2012, we issued and sold to investors at a purchase price of $0.75 per unit an aggregate of 12,120,273 shares of our Series A convertible preferred stock and warrants to purchase 108,216 shares of our common stock for an aggregate purchase price of $9.1 million.

No underwriters were involved in the foregoing sales of securities. The securities described in this section (a) of Item 15 were issued to investors in reliance upon the exemption from the registration requirements of the Securities Act, as set forth in Section 4(2) under the Securities Act relative to transactions by an issuer not involving any public offering, to the extent an exemption from such registration was required. All purchasers of shares of our preferred stock described above represented to us in connection with their purchase that they were accredited investors and were acquiring the shares for their own account for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time. The purchasers received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration statement or an available exemption from such registration.

(b) Stock Option and Restricted Stock Grants

Since inception, we have (i) issued 107,142 shares of restricted common stock, at a purchase price of $0.001 per share, to an executive officer pursuant to the 2011 Stock Incentive Plan, (ii) granted stock options to purchase an aggregate of 465,974 shares of our common stock, with exercise prices ranging from $0.28 to $16.80 per share, to employees, directors and consultants pursuant to the 2011 Stock Incentive Plan and (iii) granted stock options to purchase an aggregate of 167,857 shares of our common stock, with an exercise price of $8.68 per share, to employees, directors and consultants outside of the 2011 Stock Incentive Plan. Of these options, none have been exercised.

The stock options and the common stock issuable upon the exercise of such options as described in this section (b) of Item 15 were issued pursuant to written compensatory plans or arrangements with our employees, directors and consultants, in reliance on the exemption provided by Rule 701 promulgated under the Securities Act. All recipients either received adequate information about us or had access, through employment or other relationships, to such information.

All of the foregoing securities described in sections (a) and (b) of Item 15 are deemed restricted securities for purposes of the Securities Act. All certificates representing the issued shares of capital stock described in this Item 15 included appropriate legends setting forth that the securities had not been registered and the applicable restrictions on transfer.

Item 16. Exhibits and Financial Statement Schedules.

(a) The exhibits to the registration statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.

(b) No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or notes

Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes to provide to the underwriter at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.

(b) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

(c) The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Baltimore, State of Maryland, on this 4th day of September, 2015.

CERECOR INC.

By: /s/ BLAKE M. PATERSON, M.D.

Blake M. Paterson, M.D.
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities held on the dates indicated.

Signature	Title	Date
/s/ BLAKE M. PATERSON, M.D. Blake M. Paterson, M.D.	Director, President and Chief Executive Officer (Principal Executive Officer)	September 4, 2015
/s/ MARIAM E. MORRIS Mariam E. Morris	Chief Financial Officer (Principal Financial and Accounting Officer)	September 4, 2015
* Eugene A. Bauer, M.D.	Director	September 4, 2015
* Isaac Blech	Director	September 4, 2015
* Phil Gutry	Director	September 4, 2015
* Uli Hacksell, Ph.D.	Director	September 4, 2015
* Magnus Persson, M.D., Ph.D.	Director	September 4, 2015
* Behshad Sheldon	Director	September 4, 2015

* Blake M. Paterson, by signing his name hereto, does hereby sign this document on behalf of each of the above-named directors of the registrant pursuant to powers of attorney duly executed by such persons.

By: /s/ BLAKE M. PATERSON, M.D.

Blake M. Paterson, M.D.
Attorney-in-fact

EXHIBIT INDEX

Exhibit Number	Description of Exhibit
1.1*	Form of Underwriting Agreement
3.1	Certificate of Incorporation of Cerecor Inc., as currently in effect
3.2	Form of Amended and Restated Certificate of Incorporation of Cerecor Inc. (to become effective upon the closing of this offering)
3.3	Bylaws of Cerecor Inc., as currently in effect
3.4	Form of Amended and Restated Bylaws of Cerecor Inc. (to become effective upon the closing of this offering)
4.1†	Second Amended and Restated Investors' Rights Agreement, dated as of July 11, 2014
4.2†	Form of Warrant to Purchase Shares of Common Stock issued in connection with the sale of Series A Convertible Preferred Stock
4.3†	Form of Warrant to Purchase Shares of Common Stock issued in connection with the sale of Series A-1 Convertible Preferred Stock, as amended by the Amendment to Common Stock Warrants, dated as of July 11, 2014
4.4†	Common Stock Warrant, dated as of April 4, 2012, issued to Maxim Partners LLC
4.5†	Form of Warrant to Purchase Shares of Common Stock, issued to CIFCO International Group and its affiliate.
4.6†	Form of Warrant to Purchase Shares of Common Stock issued in connection with the issuance of convertible promissory notes from April 2014 through June 2014
4.7†	Warrant Agreement, dated as of August 19, 2014, issued to Hercules Technology Growth Capital, Inc.
4.8*	Form of Underwriters' Warrants to Purchase Common Stock of Cerecor (included in Exhibit 1.1, Annex V)
5.1	Opinion of Morgan, Lewis & Bockius LLP
10.1#†	Exclusive Patent and Know-How License Agreement, effective as of March 19, 2013, by and between Essex Chemie AG and Cerecor Inc.
10.2#†	Exclusive Patent and Know-How License Agreement, effective as of March 19, 2013, by and between Essex Chemie AG and Cerecor Inc.
10.3#†	Exclusive Patent and Know-How License Agreement, effective as of February 18, 2015, by and between Eli Lilly and Company and Cerecor Inc.
10.4+†	Cerecor Inc. 2011 Stock Incentive Plan, as amended, including forms of Incentive Stock Option Agreements and Nonqualified Stock Option Agreements thereunder
10.5	Cerecor Inc. 2015 Omnibus Incentive Plan, including form of Nonqualified Stock Option Agreements thereunder
10.6+†	Offer Letter Agreement by and between Cerecor Inc. and Blake M. Paterson, dated as of April 28, 2011
10.7+†	Offer Letter Agreement by and between Cerecor Inc. and John Kaiser, dated as of September 12, 2012

Exhibit Number	Description of Exhibit
10.8+†	Offer Letter Agreement by and between Cerecor Inc. and James Vornov, dated as of September 18, 2012
10.9+†	Offer Letter Agreement by and between Cerecor Inc. and Ronald Marcus, dated as of May 5, 2015
10.10+†	Offer Letter Agreement by and between Cerecor Inc. and Uli Hacksell, dated as of May 20, 2015
10.11	Offer Letter Agreement by and between Cerecor Inc. and Mariam Morris, effective as of August 24, 2015
10.12	Form of Director Indemnification Agreement
10.13	List of current directors with a Director Indemnification Agreement in the form provided as Exhibit 10.12
10.14†	Lease Agreement by and between Cerecor Inc. and PDL Pratt Associates, LLC, dated as of August 8, 2013
10.15†	Loan and Security Agreement, dated as of August 19, 2014, by and between Cerecor Inc. and Hercules Technology Growth Capital, Inc.
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm
23.2	Consent of Morgan, Lewis and Bockius LLP (included in Exhibit 5.1)
24.1†	Power of Attorney (included in the signature page to this registration statement)

* To be filed by amendment.

\+ Management contract or compensatory agreement.

\# Confidential treatment requested under 17 C.F.R. §§ 200.80(b)(4) and 230.406. The confidential portions of this exhibit have been omitted and are marked accordingly. The confidential portions have been filed separately with the Securities and Exchange Commission.

† Previously filed.

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Exhibit 3.1

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
CERECOR INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Cerecor Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "**General Corporation Law**"),

DOES HEREBY CERTIFY:

1. That the Corporation was originally incorporated in Delaware under the name Ceregen Corporation, and the date of its filing of its original Certificate of Incorporation (the "**Original Certificate**") with the Secretary of State of the State of Delaware was January 31, 2011. The Original Certificate was amended on March 17, 2011, amended and restated on February 14, 2012, further amended on May 18, 2012, and amended and restated on August 23, 2013 (as so amended, the "**Amended Certificate**").

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Cerecor Inc. (the "**Corporation**").

SECOND: The registered office of the Corporation is located at c/o Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, New Castle County, Delaware 19808. The name of its registered agent at that address is Corporation Service Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 230,000,000 shares of Common Stock, $0.001 par value per share ("**Common Stock**") and (ii) 155,190,902 shares of Preferred Stock, $0.001 par value per share ("**Preferred Stock**").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. *General.* The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. *Voting.* The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings); *provided*, *however*, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to the Certificate of Incorporation that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either

separately or together with the holders of one or more other such series, to vote thereon pursuant to the Certificate of Incorporation or pursuant to the General Corporation Law. There shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of the Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

31,116,391 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A Preferred Stock**", 9,074,511 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-1 Preferred Stock**" and 115,000,000 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series B Preferred Stock**" with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "sections" or "subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. *Dividends.*

From and after the date hereof, the Corporation shall issue non-cumulative dividends at the rate per annum of 8% per share, based on the applicable Original Issue Price (as defined below), on all outstanding shares of Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Preferred Stock), (the "**Preferred Dividends**"), such Preferred Dividends to be payable only when, as, and if declared by the Board of Directors and the Corporation shall be under no obligation to declare such Preferred Dividends. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Preferred Stock in an amount at least equal to the sum of (i) the amount of the Preferred Dividends then accrued on such share of Preferred Stock and not previously paid and (ii) (A) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Preferred Stock as would equal the product of (1) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (2) the number of shares of Common Stock issuable upon conversion of a share of Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (B) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Preferred Stock determined by (1) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (2) multiplying such fraction by an amount equal to the applicable Original Issue Price; *provided* that if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Preferred Stock pursuant to this *Section 1* shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Preferred Stock dividend. The "**Original Issue Price**" shall mean (x) with respect to Series A Preferred Stock, $0.75 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock (the "**Series A Original Issue Price**"), (y) with respect to Series A-1 Preferred Stock, $0.75 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A-1 Preferred Stock (the "**Series A-1 Original**

Issue Price") and (z) with respect to Series B Preferred Stock, $0.29990 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock (the "**Series B Original Issue Price**").

2. *Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.*

2.1 *Preferential Payments to Holders of Preferred Stock.*

2.1.1. *Preferential Payments to Holders of Series B Preferred Stock.* In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the holders of shares of Series B Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Series A Preferred Stock, Series A-1 Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series B Original Issue Price, plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Preferred Stock been converted into Common Stock pursuant to *Section 4* immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence is hereinafter referred to as the "**Series B Liquidation Amoun**t"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series B Preferred Stock the full amount to which they shall be entitled under this *Section 2.1.1*, the holders of shares of Series B Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.1.2. *Payments to Holders of Series A Preferred Stock and Series A-1 Preferred Stock.* In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, after the payment of all preferential amounts required to be paid to the holders of shares of Series B Preferred Stock, the holders of shares of Series A Preferred Stock and Series A-1 Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) the Series A Original Issue Price or Series A-1 Original Issue Price, as applicable, plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Preferred Stock been converted into Common Stock pursuant to *Section 4* immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence is hereinafter referred to as the "**Series A Liquidation Amount**" or "**Series A-1 Liquidation Amount**" as applicable). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, and after the payments described in *Section 2.1.1* have been made, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series A-1 Preferred Stock and Series A Preferred Stock the full amount to which they shall be entitled under this *Section 2.1.2*, the holders of shares of Series A-1 Preferred Stock and Series A Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 *Payments to Holders of Common Stock.* In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, after the

payment of all preferential amounts required to be paid to the holders of shares of Preferred Stock, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of shares of Common Stock, pro rata based on the number of shares held by each such holder.

2.3 *Deemed Liquidation Events.*

2.3.1. *Definition.* Each of the following events shall be considered a "**Deemed Liquidation Event**" unless the holders of a majority of the outstanding shares of Series B Preferred Stock (the "**Requisite Holders**") elect otherwise by written notice sent to the Corporation prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation; or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger, consolidation or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

For the avoidance of doubt, the issuance of stock pursuant to customary venture capital financings by the Corporation shall not be considered a "Deemed Liquidation Event."

2.3.2. *Effecting a Deemed Liquidation Event.*

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in *Section 2.3.1(a)(i*) unless the agreement or plan of merger or consolidation for such transaction (the " **Merger Agreement**") provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with *Sections 2.1* and *2.2*.

(b) In the event of a Deemed Liquidation Event referred to in *Section 2.3.1(a)(ii)* or *2.3.1(b)*, if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within ninety (90) days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock no later than the ninetieth (90^{th}) day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause; (ii) to require the redemption of such shares of Preferred Stock, and (iii) if the Requisite Holders so request in a written instrument

delivered to the Corporation not later than one hundred twenty (120) days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "**Available Proceeds**"), on the one hundred fiftieth (150^{th}) day after such Deemed Liquidation Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the Series B Liquidation Amount, Series A-1 Liquidation Amount or Series A Liquidation Amount, as applicable. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock, the Corporation shall ratably redeem each holder's shares of Preferred Stock to the fullest extent of such Available Proceeds in accordance with the liquidation preferences set forth in *Section 2.1* hereof, and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders. Prior to the distribution or redemption provided for in this *Section 2.3.2(b)*, the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event.

(c) In connection with the redemption of Preferred Stock as set forth in this *Section 2.3.2,* the Corporation shall send written notice of such redemption (the "**Redemption Notice**") to each holder of record of Preferred Stock not less than forty (40) days prior to each Redemption Date. Each Redemption Notice shall state:

(i) the number of shares of Preferred Stock held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice;

(ii) the Redemption Date and the Redemption Price;

(iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with *Section 4.1*); and

(iv) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Preferred Stock to be redeemed.

If the Corporation receives, on or prior to the twentieth (20^{th}) day after the date of delivery of the Redemption Notice to a holder of Preferred Stock, written notice from such holder that such holder elects to be excluded from the redemption provided in this *Section 2.3.2,* then the shares of Preferred Stock registered on the books of the Corporation in the name of such holder at the time of the Corporation's receipt of such notice shall thereafter be "**Excluded Shares**." Excluded Shares shall not be redeemed or redeemable pursuant to this *Section 2.3.2*, whether on such Redemption Date or thereafter.

(d) *Surrender of Certificates; Payment.* On or before the applicable Redemption Date, each holder of shares of Preferred Stock to be redeemed on such Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in *Section 4*, shall, if a holder of shares in certificated form, surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and

agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of Preferred Stock represented by a certificate are redeemed, a new certificate, instrument, or book entry representing the unredeemed shares of Preferred Stock shall promptly be issued to such holder.

(e) *Rights Subsequent to Redemption.* If the Redemption Notice shall have been duly given, and if on the applicable Redemption Date the Redemption Price payable upon redemption of the shares of Preferred Stock to be redeemed on such Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that any certificates evidencing any of the shares of Preferred Stock so called for redemption shall not have been surrendered, dividends with respect to such shares of Preferred Stock shall cease to accrue after such Redemption Date and all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Redemption Price without interest upon surrender of any such certificate or certificates therefor.

2.3.3. *Amount Deemed Paid or Distributed.* The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities paid or distributed to such holders by the Corporation or the acquiring person, firm or other entity. The value of such property, rights or securities shall be determined in good faith by the Board of Directors of the Corporation.

2.3.4. *Allocation of Escrow and Contingent Consideration.* In the event of a Deemed Liquidation Event, if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the "**Additional Consideration**"), the Merger Agreement and any other applicable agreements executed in connection with such Deemed Liquidation Event shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with *Sections 2.1* and *2.2* as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with *Sections 2.1* and *2.2* after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this *Section 2.3.4*, consideration placed into escrow or retained as holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration.

3. *Voting.*

3.1 *General.* On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of the Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class.

3.2 *Election of Directors.* The holders of record of the shares of Series B Preferred Stock, exclusively and as a separate class, shall be entitled to elect five (5) directors of the Corporation (the "**Series B Directors**"); the holders of record of the shares of Series A Preferred Stock and Series A-1 Preferred Stock, exclusively and voting together as a single class, shall be entitled to elect one (1) director of the Corporation; and the holders of record of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect two (2) directors of the Corporation. Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this *Section 3.2*, then any directorship not so filled shall remain vacant until such time as the holders of the Preferred Stock or Common Stock, as the case may be, elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Preferred Stock), exclusively and voting together as a single class, shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this *Section 3.2*, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this *Section 3.2*.

3.3 *Preferred Stock Protective Provisions.* At any time when shares of Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the Requisite Holders, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect.

3.3.1. (i) liquidate, dissolve or wind-up the business and affairs of the Corporation; (ii) effect any merger, consolidation, reclassification or recapitalization of the outstanding capital stock of the Corporation or any other Deemed Liquidation Event; (iii) enter into any agreement regarding a license of intellectual property outside of the ordinary course of business, a material asset transfer, a material acquisition by the Corporation or a Deemed Liquidation Event; or (iv) consent to any of the foregoing;

3.3.2. amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation;

3.3.3. (i) create, or authorize the creation of, or issue or obligate itself to issue shares of, whether by reclassification or otherwise, any additional class or series of capital stock or any other equity or debt securities convertible into equity securities of the Corporation unless the same ranks junior to the existing Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, voting, the payment of dividends and rights of redemption; or (ii) increase the authorized number of shares of Preferred Stock or Common Stock, or increase the authorized number of shares of any additional class or series of capital stock or such other securities;

3.3.4. (i) reclassify, alter or amend any existing security of the Corporation that is pari passu with the existing Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to the Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with any series of Preferred Stock in respect of any such right, preference or privilege;

3.3.5. purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof;

3.3.6. create, or authorize the creation of, or issue, or authorize the issuance of any debt security, or permit any subsidiary to take any such action with respect to any debt security, if the aggregate indebtedness of the Corporation and its subsidiaries for borrowed money following such action would exceed $500,000 unless such debt security has received the prior approval of the Board of Directors, including the approval of at least three Series B Directors;

3.3.7. enter into any interested party transaction, unless approved by the Board of Directors (including a disinterested majority of the Board of Directors, which shall include at least three Series B Directors so long as at least three Series B Directors are disinterested or, if fewer than three Series B Directors are disinterested, all Series B Directors); or

3.3.8. increase or decrease the authorized number of directors constituting the Board of Directors or alter the method of selecting members of the Board of Directors.

3.4 *Additional Protective Provisions.*

3.4.1. At any time when at least 3,111,639 shares of Series A Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock) are outstanding, in addition to any other vote or consent required herein or by law, the vote or written consent of the holders of at least a majority of the outstanding shares of Series A Preferred Stock shall be necessary for effecting any amendment, alteration, or repeal of any provision of the Certificate of Incorporation or Bylaws of the Corporation that alters or changes the voting or other powers, preferences, or other special rights, privileges or restrictions of the Series A Preferred Stock (whether by merger consolidation or otherwise) so as to affect the Series A Preferred Stock adversely and in a manner different than any other series of Preferred Stock (it being understood that the Series A Preferred Stock shall not be affected differently because of the proportional differences in the amounts of respective issue prices, liquidation preferences and redemption prices that arise out of differences in the Original Issue Price vis-à-vis other series of Preferred Stock).

3.4.2. At any time when at least 907,451 shares of Series A-1 Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A-1 Preferred Stock) are outstanding, in

addition to any other vote or consent required herein or by law, the vote or written consent of the holders of at least a majority of the outstanding shares of Series A-1 Preferred Stock shall be necessary for effecting any amendment, alteration, or repeal of any provision of the Certificate of Incorporation or Bylaws of the Corporation that alters or changes the voting or other powers, preferences, or other special rights, privileges or restrictions of the Series A-1 Preferred Stock (whether by merger consolidation or otherwise) so as to affect the Series A-1 Preferred Stock adversely and in a manner different than any other series of Preferred Stock (it being understood that the Series A-1 Preferred Stock shall not be affected differently because of the proportional differences in the amounts of respective issue prices, liquidation preferences and redemption prices that arise out of differences in the Original Issue Price vis-à-vis other series of Preferred Stock).

3.4.3. At any time when at least 5,335,112 shares of Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock) are outstanding, in addition to any other vote or consent required herein or by law, the vote or written consent of the Requisite Holders shall be necessary for effecting any amendment, alteration, or repeal of any provision of the Certificate of Incorporation or Bylaws of the Corporation that alters or changes the voting or other powers, preferences, or other special rights, privileges or restrictions of the Series B Preferred Stock (whether by merger consolidation or otherwise) so as to affect the Series B Preferred Stock adversely and in a manner different than any other series of Preferred Stock (it being understood that the Series B Preferred Stock shall not be affected differently because of the proportional differences in the amounts of respective issue prices, liquidation preferences and redemption prices that arise out of differences in the Original Issue Price vis-à-vis other series of Preferred Stock).

4. *Optional Conversion*.

The holders of Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 *Right to Convert*.

4.1.1. *Conversion Ratio.* Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the applicable Original Issue Price by the applicable Conversion Price (as defined below) in effect at the time of conversion. The "**Conversion Price**" shall mean (a) with respect to Series A Preferred Stock, an amount initially equal to $0.60 per share (the "**Series A Conversion Price**"), (b) with respect to Series A-1 Preferred Stock, an amount initially equal to $0.50 per share (the "**Series A-1 Conversion Price**") and (c) with respect to Series B Preferred Stock, an amount initially equal to $0.29990 per share (the "**Series B Conversion Price**"). Such initial Series A Conversion Price, Series A-1 Conversion Price and Series B Conversion Price and the rate at which shares of Series A Preferred Stock, Series A-1 Preferred Stock and Series B Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2. *Termination of Conversion Rights.* In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 *Fractional Shares.* No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value

of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 *Mechanics of Conversion.*

4.3.1. *Notice of Conversion.* In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Preferred Stock and, if applicable, any event on which such conversion is contingent and (b), if such holder's shares are certificated, surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in *Section 4.2* in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2. *Reservation of Shares.* The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Conversion Price of any series of Preferred Stock below the then par value of the shares of Common Stock issuable upon conversion of such

Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted Conversion Price.

4.3.3. *Effect of Conversion.* All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in *Section 4.2* and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

4.3.4. *No Further Adjustment.* Upon any such conversion, no adjustment to the Conversion Price of any series of Preferred Stock shall be made for any declared but unpaid dividends on such Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5. *Taxes.* The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this *Section 4*. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 *Adjustments to Conversion Price for Diluting Issues.*

4.4.1. *Special Definitions.* For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Original Issue Date**" shall mean the date on which the first share of Series B Preferred Stock was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean all shares of Common Stock issued (or, pursuant to *Section 4.4.3* below, deemed to be issued) by the Corporation after the Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by *Section 4.5, 4.6, 4.7* or *4.8***;**

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Corporation, including at least three Series B Directors; or

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security.

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation , including at least three Series B Directors; or

(vi) shares of Common Stock, Options or Convertible Securities issued to company advisors, suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation, including at least three Series B Directors; or

(vii) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another entity by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture or development project agreement, *provided* that such issuances are approved by the Board of Directors of the Corporation, including at least three Series B Directors;

(viii) shares of Series B Preferred Stock issued pursuant to that certain Series B Preferred Stock Purchase Agreement dated on or about the date hereof by and among the Corporation and certain investors (the "**Purchase Agreement**"); or

(ix) shares of Common Stock issued pursuant to a Qualified IPO (as defined below).

4.4.2. *No Adjustment of Conversion Price.* No adjustment in the Conversion Price of any series of Preferred Stock shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the Requisite Holders agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3. *Deemed Issue of Additional Shares of Common Stock*.

(a) If the Corporation at any time or from time to time after the Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case

such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of *Section 4.4.4*, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the applicable Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such applicable Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the applicable Conversion Price to an amount which exceeds the lower of (i) the applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the applicable Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of *Section 4.4.4* (either because the consideration per share (determined pursuant to *Section 4.4.5*) of the Additional Shares of Common Stock subject thereto was equal to or greater than the applicable Conversion Price then in effect, or because such Option or Convertible Security was issued before the Original Issue Date), are revised after the Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in *Section 4.4.3(a)* shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Conversion Price of any series of Preferred Stock pursuant to the terms of *Section 4.4.4*, the applicable Conversion Price shall be readjusted to such applicable Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the applicable Conversion Price provided for in this *Section 4.4.3* shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this *Section 4.4.3*). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the applicable Conversion Price that would result under the terms of this *Section 4.4.3* at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the applicable Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4. *Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock.* In the event the Corporation shall at any time after the Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to *Section 4.4.3*), without consideration or for a consideration per share less than the Series B Conversion Price in effect immediately prior to such issue, then each Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula (provided, that in no event shall the Conversion Price for any series of Preferred Stock be increased pursuant to the operation of such formula):

$$CP2 = CP1* (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP2" shall mean the applicable Conversion Price in effect immediately after such issue of Additional Shares of Common Stock

(b) "CP1" shall mean the applicable Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to the Series B Conversion Price in effect immediately prior to such issue (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by the Series B Conversion Price in effect immediately prior to such issue); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

Notwithstanding the foregoing, the maximum proportional adjustment pursuant to this *Section 4.4.4* for any series of Preferred Stock shall be equal to the lowest proportional adjustment of any series of Preferred Stock determined by the foregoing formula. As an example, if the foregoing formula would result in the Series A Conversion Price being reduced from $0.60 to $0.45, the Series A-1 Conversion Price being reduced from $0.50 to $0.36 and the Series B Conversion Price being reduced from $0.29990 to $0.23992, then the Conversion Price of each series of Preferred Stock would be reduced by 20%, such that the new Series A Conversion Price would be equal to $0.48, the new Series A-1 Conversion Price would be equal to $0.40 and the new Series B Conversion Price would be equal to $0.23992.

4.4.5. *Determination of Consideration.* For purposes of this *Section 4.4*, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) *Cash and Property:* Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) *Options and Convertible Securities.* The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to *Section 4.4.3*, relating to Options and Convertible Securities, shall be determined by dividing:

(i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6. *Multiple Closing Dates.* In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Conversion Price of any

series of Preferred Stock pursuant to the terms of *Section 4.4.4*, then, upon the final such issuance, the applicable Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 *Adjustment for Stock Splits and Combinations.* If the Corporation shall at any time or from time to time after the Original Issue Date effect a subdivision of the outstanding Common Stock, the Conversion Price of each series of Preferred Stock in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Original Issue Date combine the outstanding shares of Common Stock, the Conversion Price of each series of Preferred Stock in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 *Adjustment for Certain Dividends and Distributions.* In the event the Corporation at any time or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Conversion Price of each series of Preferred Stock in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the applicable Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Conversion Price of each series of Preferred Stock shall be recomputed accordingly as of the close of business on such record date and thereafter the Conversion Price of each series of Preferred Stock shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.7 *Adjustments for Other Dividends and Distributions.* In the event the Corporation at any time or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of *Section 1* do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock,

a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 *Adjustment for Merger or Reorganization, etc.* Subject to the provisions of *Section 2.3*, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by *Sections 4.4*, *4.6* or *4.7*), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this *Section 4* with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this *Section 4* (including provisions with respect to changes in and other adjustments of the applicable Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock. For the avoidance of doubt, nothing in this *Section 4.8* shall be construed as preventing the holders of Preferred Stock from seeking any appraisal rights to which they are otherwise entitled under the DGCL in connection with a merger triggering an adjustment hereunder, nor shall this *Section 4.8* be deemed conclusive evidence of the fair value of the shares of Preferred Stock in any such appraisal proceeding.

4.9 *Certificate as to Adjustments.* Upon the occurrence of each adjustment or readjustment of the Conversion Price of any series of Preferred Stock pursuant to this *Section 4,* the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than ten (10) days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of such series of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Preferred Stock (but in any event not later than ten (10) days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the applicable Conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of such shares of Preferred Stock.

4.10 *Notice of Record Date.* In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least ten (10) days prior to the record date or effective date for the event specified in such notice.

5. *Mandatory Conversion.*

5.1 *Trigger Events.* Upon either (a) the closing of the sale of shares of Common Stock to the public at a price of at least $0.59980 per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock), in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $45,000,000 of gross proceeds to the Corporation, before deduction of the underwriting discounts, commissions and expenses (a "**Qualified IPO**"), or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the Requisite Holders (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "**Mandatory Conversion Time**"), then (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate for each series of Preferred Stock as calculated pursuant to *Section 4.1.1.* and (ii) such shares may not be reissued by the Corporation.

5.2 *Procedural Requirements.* All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this *Section 5*. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to *Section 5.1*, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this *Section 5.2*. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b)pay cash as provided in *Section 4.2* in lieu of any fraction of a share of Common Stock otherwise issuable upon such

conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

5A. *Special Mandatory Conversion.*

5A.1. *Trigger Event.* In the event that any holder of shares of Series B Preferred Stock other than an Excluded Investor (as defined in that certain Series B Preferred Stock Purchase Agreement, dated on or about the date hereof, by and between the Corporation and the other signatories thereto) (each a "**Qualified Holder**") does not participate in a Qualified Financing (as defined below) by purchasing in the aggregate, in such Qualified Financing and within the time period specified by the Corporation (*provided* that, the Corporation has sent to each Qualified Holder at least ten (10) days written notice of, and the opportunity to purchase its Pro Rata Amount (as defined below) of, the Qualified Financing), such Qualified Holder's Pro Rata Amount, then each share of Series B Preferred Stock held by such Qualified Holder shall automatically, and without any further action on the part of such Qualified Holder, be converted into one-tenth (1/10) of a share of Common Stock, effective upon, subject to, and concurrently with, the consummation of the Qualified Financing. For purposes of determining the number of shares of Series B Preferred Stock owned by a Qualified Holder, and for determining the number of Offered Securities (as defined below) a Qualified Holder has purchased in a Qualified Financing, all shares of Series B Preferred Stock held by Affiliates (as defined below) of such Qualified Holder shall be aggregated with such Qualified Holder's shares and all Offered Securities purchased by Affiliates of such Qualified Holder shall be aggregated with the Offered Securities purchased by such Qualified Holder (*provided* that no shares or securities shall be attributed to more than one entity or person within any such group of affiliated entities or persons). Such conversion is referred to as a "**Special Mandatory Conversion.**"

5A.2. *Procedural Requirements.* Upon a Special Mandatory Conversion, each Qualified Holder converted pursuant to *Section 5A.1* shall be sent written notice of such Special Mandatory Conversion and the place designated for mandatory conversion of all such shares of Series B Preferred Stock pursuant to this *Section 5A*. Upon receipt of such notice, each Qualified Holder of such shares of Series B Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that any such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Series B Preferred Stock converted pursuant to *Section 5A.1*, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the time of the Special Mandatory Conversion (notwithstanding the failure of the Qualified Holder or Qualified Holders thereof to surrender any certificates for such shares at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such Qualified Holders therefor (or lost certificate affidavit and agreement), to receive the items provided for in the next sentence of this *Section 5A.2*. As soon as practicable after the Special Mandatory Conversion and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Series B Preferred Stock so converted, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b) pay cash as provided

in *Section 4.2* in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Series B Preferred Stock converted. Such converted Series B Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series B Preferred Stock accordingly.

5A.3. *Definitions.* For purposes of this *Section 5A*, the following definitions shall apply:

5A.3.1 "**Affiliate**" shall mean, with respect to any holder of shares of Series B Preferred Stock, any person, entity or firm which, directly or indirectly, controls, is controlled by or is under common control with such holder, including, without limitation, any entity of which the holder is a partner or member, any partner, officer, director, member or employee of such holder and any venture capital fund now or hereafter existing of which the holder is a partner or member which is controlled by or under common control with one or more general partners of such holder or shares the same management company with such holder.

5A.3.2 "**Offered Securities**" shall mean the equity securities of the Corporation set aside by the Board of Directors of the Corporation for purchase by holders of outstanding shares of Series B Preferred Stock in connection with a Qualified Financing, and offered to such holders.

5A.3.3 "**Pro Rata Amount**" shall mean, with respect to any Qualified Holder, the lesser of (a) a number of Offered Securities calculated by multiplying the aggregate number of Offered Securities by a fraction, the numerator of which is equal to the number of shares of Series B Preferred Stock owned by such Qualified Holder, and the denominator of which is equal to the aggregate number of outstanding shares of Series B Preferred Stock owned by all Qualified Holders, or (b) the maximum number of Offered Securities that such Qualified Holder is permitted by the Corporation to purchase in such Qualified Financing, after giving effect to any cutbacks or limitations established by the Board of Directors and applied on a pro rata basis to all Qualified Holders.

5A.3.4 "**Qualified Financing**" shall mean any transaction involving the issuance or sale of Series B Preferred Stock after the Original Issue Date pursuant to the terms of the Purchase Agreement, unless the Requisite Holders elect, by written notice sent to the Corporation prior to the consummation of the Qualified Financing, that such transaction not be treated as a Qualified Financing for purposes of this *Section 5A*.

6. *Redemption.* The shares of Preferred Stock are not redeemable.

7. *Redeemed or Otherwise Acquired Shares.* Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

8. *Waiver.* Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the Requisite Holders.

9. *Notices.* Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by the Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by the Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: The following indemnification provisions shall apply to the persons enumerated below.

1. *Right to Indemnification of Directors and Officers.* The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "**Indemnified Person**") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**"), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys" fees) reasonably incurred by such Indemnified Person in such Proceeding. Notwithstanding the preceding sentence, except as otherwise provided in *Section 3* of this Article Tenth, the Corporation shall be required to indemnify an Indemnified Person in connection with a Proceeding (or part thereof) commenced by such Indemnified Person only if the commencement of such Proceeding (or part thereof) by the Indemnified Person was authorized in advance by the Board of Directors.

2. *Prepayment of Expenses of Directors and Officers.* The Corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnified Person in defending any Proceeding in advance of its final disposition, *provided*, *however*, that, to the extent required by law, such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the Indemnified Person to repay all amounts advanced if it should be ultimately determined that the Indemnified Person is not entitled to be indemnified under this Article Tenth or otherwise.

3. *Claims by Directors and Officers.* If a claim for indemnification or advancement of expenses under this Article Tenth is not paid in full within thirty (30) days after a written claim therefor by the Indemnified Person has been received by the Corporation, the Indemnified Person may file suit to

recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Indemnified Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

4. *Indemnification of Employees and Agents.* The Corporation may indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any Proceeding by reason of the fact that such person, or a person for whom such person is the legal representative, is or was an employee or agent of the Corporation or, while an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such person in connection with such Proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board of Directors in its sole discretion. Notwithstanding the foregoing sentence, the Corporation shall not be required to indemnify a person in connection with a Proceeding initiated by such person if the Proceeding was not authorized in advance by the Board of Directors.

5. *Advancement of Expenses of Employees and Agents.* The Corporation may pay the expenses (including attorneys' fees) incurred by an employee or agent in defending any Proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board of Directors.

6. *Non-Exclusivity of Rights.* The rights conferred on any person by this Article Tenth shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the certificate of incorporation, these by-laws, agreement, vote of stockholders or disinterested directors or otherwise.

7. *Other Indemnification.* The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise.

8. *Insurance.* The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article Tenth; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article Tenth.

9. *Amendment or Repeal.* Any repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Indemnified Person and such person's heirs, executors and administrators.

ELEVENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "**Excluded Opportunity**" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Series B Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, "**Covered Persons**"), unless such matter, transaction or interest is presented to, or acquired,

created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation.

TWELFTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Twelfth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Twelfth (including, without limitation, each portion of any sentence of this Article Twelfth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on July 11, 2014.

By: /s/ DR. BLAKE PATERSON

Name: Dr. Blake Paterson
Title: *Chief Executive Officer*

CERTIFICATE OF AMENDMENT TO
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF CERECOR INC.

CERECOR INC., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "***DGCL***"), does hereby certify:

FIRST: The name of the corporation is Cerecor Inc. (the "***Company***").

SECOND: The date on which the Certificate of Incorporation of the Company was originally filed with the Secretary of State of the State of Delaware is January 31, 2011.

THIRD: The Board of Directors of the Company, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, adopted resolutions approving a reverse stock split and further amending the Company's Amended and Restated Certificate of Incorporation by inserting after the first paragraph of Article IV the following new paragraphs:

"Effective immediately upon this Certificate of Amendment becoming effective under the Delaware General Corporation Law, and without any further action by the holders of such shares, every twenty-eight (28) outstanding shares of the Company's Common Stock shall be combined into one (1) validly issued, fully paid and non-assessable share of Common Stock (the "***Reverse Stock Split***").

No fractional shares of Common Stock shall be issued upon combination of the Common Stock in the Reverse Stock Split. All shares of Common Stock so combined that are held by a stockholder shall be aggregated subsequent to the foregoing Reverse Stock Split. If the Reverse Stock Split would result in the issuance of any fractional share, the Company shall, in lieu of issuing any fractional share, pay cash equal to the product of such fraction multiplied by the fair market value of one share of Common Stock (as determined by the Board of Directors) on the date that the Reverse Stock Split is effective, rounded up to the nearest whole cent.

The par value of each share of Common Stock shall not be adjusted in connection with the Reverse Stock Split. All of the outstanding share amounts, amounts per share and per share numbers for the Common Stock and each series of Preferred Stock, par value $0.001 per share, set forth in the Company's Amended and Restated Certificate of Incorporation, as amended to date, shall be appropriately adjusted to give effect to the Reverse Stock Split, as applicable."

FOURTH: The Board of Directors of the Company, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, adopted resolutions amending the Company's Amended and Restated Certificate of Incorporation by deleting paragraph 5.1 of Article IV and replacing it in its entirey with the following new paragraphs:

"5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public in an underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, (a "**Qualified IPO**"), or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the Requisite Holders (the time of such closing or the date and time specified or the time of

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the event specified in such vote or written consent is referred to herein as the "**Mandatory Conversion Time**"), then (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate for each series of Preferred Stock as calculated pursuant to Section 4.1.1. and (ii) such shares may not be reissued by the Corporation."

FIFTH: Thereafter, pursuant to a resolution of the Board of Directors, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval, and was duly adopted in accordance with the provisions of Sections 228 and 242 of the General Corporation Law of the State of Delaware.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, Cerecor Inc. has caused this Certificate of Amendment of the Amended and Restated Certificate of Incorporation to be executed by its duly authorized officer on this 1st day of September 2015.

CERECOR INC.

By: /s/ Dr. Blake Paterson
Dr. Blake Paterson
Chief Executive Officer

QuickLinks

Exhibit 3.2

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
CERECOR INC.

Blake M. Paterson hereby certifies that:

ONE: The original name of this company is Cerecor Inc. and the date of filing the original Certificate of Incorporation of this company with the Secretary of State of the State of Delaware was January 31, 2011. The Certificate of Incorporation was last amended and restated on July 11, 2014.

TWO: He is the duly elected and acting President and Chief Executive Officer of Cerecor Inc., a Delaware corporation.

THREE: The Certificate of Incorporation of this company is hereby amended and restated to read as follows:

I.

The name of this company is **CERECOR INC.** (the "***Company***" or the "***Corporation***").

II.

The address of the registered office of this Corporation in the State of Delaware is 2711 Centerville Road, Suite 400, City of Wilmington, County of New Castle, Zip Code 19808, and the name of the registered agent of this Corporation in the State of Delaware at such address is Corporation Service Company.

III.

The purpose of this Company is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law ("***DGCL***").

IV.

A. This Company is authorized to issue two classes of stock to be designated, respectively, "***Common Stock***" and "***Preferred Stock***." The total number of shares which the Company is authorized to issue is two hundred five million (205,000,000) shares. Two hundred million (200,000,000) shares shall be Common Stock, each having a par value of one-tenth of one cent ($0.001). Five million (5,000,000) shares shall be Preferred Stock, each having a par value of one-tenth of one cent ($0.001).

B. The Preferred Stock may be issued from time to time in one or more series. The Board of Directors of the Company (the "***Board of Directors***") is hereby expressly authorized to provide for the issue of all or any of the shares of the Preferred Stock in one or more series, and to fix the number of shares and to determine or alter for each such series, such voting powers, full or limited, or no voting powers, and such designation, preferences, and relative, participating, optional, or other rights and such qualifications, limitations, or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issuance of such shares and as may be permitted by the DGCL. The Board of Directors is also expressly authorized to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be decreased in accordance with the foregoing sentence, the shares constituting such decrease shall resume

the status that they had prior to the adoption of the resolution originally fixing the number of shares of such series. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of the stock of the corporation entitled to vote thereon, without a separate vote of the holders of the Preferred Stock, or of any series thereof, unless a vote of any such holders is required pursuant to the terms of any certificate of designation filed with respect to any series of Preferred Stock.

C. Each outstanding share of Common Stock shall entitle the holder thereof to one vote on each matter properly submitted to the stockholders of the corporation for their vote; *provided, however*, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon by law or pursuant to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock).

V.

For the management of the business and for the conduct of the affairs of the Company, and in further definition, limitation and regulation of the powers of the Company, of its directors and of its stockholders or any class thereof, as the case may be, it is further

provided that:

A. MANAGEMENT OF BUSINESS. The management of the business and the conduct of the affairs of the Company shall be vested in its Board of Directors. The number of directors which shall constitute the Board of Directors shall be fixed exclusively by resolutions adopted by a majority of the authorized number of directors constituting the Board of Directors.

B. BOARD OF DIRECTORS

Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, following the closing of the initial public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "***1933 Act***"), covering the offer and sale of Common Stock to the public (the "***Initial Public Offering***"), the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this section, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

C. REMOVAL OF DIRECTORS.

1. Subject to the rights of any series of Preferred Stock to elect additional directors under specified circumstances, following the closing of the Initial Public Offering, neither the Board of Directors nor any individual director may be removed without cause.

2. Subject to any limitation imposed by law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all then-outstanding shares of capital stock of the Corporation entitled to vote generally at an election of directors.

D. VACANCIES. Subject to any limitations imposed by applicable law and subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors, shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders and except as otherwise provided by applicable law, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified.

E. BYLAW AMENDMENTS. The Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the Company. Any adoption, amendment or repeal of the Bylaws of the Company by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders shall also have power to adopt, amend or repeal the Bylaws of the Company; *provided, however,* that, in addition to any vote of the holders of any class or series of stock of the Company required by law or by this Amended and Restated Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class.

F. WRITTEN BALLOTS. The directors of the Company need not be elected by written ballot unless the Bylaws so provide.

G. ACTION BY STOCKHOLDERS. No action shall be taken by the stockholders of the Company except at an annual or special meeting of stockholders called in accordance with the Bylaws, and no action shall be taken by the stockholders by written consent or electronic transmission.

H. ADVANCED NOTICE. Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the Company shall be given in the manner provided in the Bylaws of the Company.

VI.

A. The liability of the directors for monetary damages shall be eliminated to the fullest extent under applicable law.

B. To the fullest extent permitted by applicable law, the Company is authorized to provide indemnification of (and

advancement of expenses to) directors, officers and agents of the Company (and any other persons to which applicable law permits the Company to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise in excess of the indemnification and advancement otherwise permitted by such

applicable law. If applicable law is amended after approval by the stockholders of this Article VI to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director to the company shall be eliminated or limited to the fullest extent permitted by applicable law as so amended.

C. Any repeal or modification of this Article VI shall only be prospective and shall not affect the rights or protections or increase the liability of any director under this Article VI in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

VII.

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (A) any derivative action or proceeding brought on behalf of the Company; (B) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or the Company's stockholders; (C) any action asserting a claim against the Company arising pursuant to any provision of the DGCL, the Amended and Restated Certificate of Incorporation or the Bylaws of the Company; or (D) any action asserting a claim against the Company governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Company shall be deemed to have notice of and to have consented to the provisions of this Article VII.

VIII.

A. The Company reserves the right to amend, alter, change or repeal any provision contained in this Amended and Restated Certificate of Incorporation, in the manner now or hereafter prescribed by statute, except as provided in paragraph B. of this Article VIII, and all rights conferred upon the stockholders herein are granted subject to this reservation.

B. Notwithstanding any other provisions of this Amended and Restated Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Company required by law or by this Amended and Restated Certificate of Incorporation or any certificate of designation filed with respect to a series of Preferred Stock, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all of the then outstanding shares of capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class, shall be required to alter, amend or repeal Articles V, VI, VII and VIII.

* * * *

FOUR: This Amended and Restated Certificate of Incorporation has been duly approved by the Board of Directors of the Company.

FIVE: This Amended and Restated Certificate of Incorporation was approved by the holders of the requisite number of shares of said corporation in accordance with Section 228 of the DGCL. This Amended and Restated Certificate of Incorporation has been duly adopted in accordance with the provisions of Sections 242 and 245 of the DGCL by the stockholders of the Company.

IN WITNESS WHEREOF, Cerecor Inc. has caused this Amended and Restated Certificate of Incorporation to be signed by its President and Chief Executive Officer this day of , 2015.

CERECOR INC.

By: _____

Blake M. Paterson
President and Chief Executive Officer

Exhibit 3.3

BYLAWS

OF

CERECOR INC.

a Delaware Corporation

Effective March 17, 2011

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BYLAWS

OF

CERECOR INC.

(hereinafter called the "Corporation")

ARTICLE I
OFFICES

Section 1. Registered Office. The registered office of the Corporation shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 2. Other Offices. The Corporation may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors of the Corporation (the "Board of Directors") may from time to time determine.

ARTICLE II
MEETINGS OF STOCKHOLDERS

Section 1. Place of Meetings. Meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, either within or without the State of Delaware, as shall be designated from time to time by the Board of Directors.

Section 2. Annual Meetings. The Annual Meeting of Stockholders for the election of directors shall be held on such date and at such time as shall be designated from time to time by the Board of Directors. Any other proper business may be transacted at the Annual Meeting of Stockholders.

Section 3. Special Meetings. Unless otherwise required by law or by the certificate of incorporation of the Corporation, as amended and restated from time to time (the "Certificate of Incorporation"), Special Meetings of Stockholders, for any purpose or purposes, may be called by either (a) the Chairman of the Board of Directors, if there be one, (b) the President, (c) any Vice President, if there be one, (d) the Secretary or (e) any Assistant Secretary, if there be one, and shall be called by any such officer at the request in writing of (i) the Board of Directors, (ii) a committee of the Board of Directors that has been duly designated by the Board of Directors and whose powers and authority include the power to call such meetings or (iii) stockholders owning a majority of the capital stock of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting. At a Special Meeting of Stockholders, only such business shall be conducted as shall be specified in the notice of meeting (or any supplement thereto).

Section 4. Notice. Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, date and hour of the meeting, and, in the case of a Special Meeting, the purpose or purposes for which the meeting is called. Unless otherwise required by law, written notice of any meeting

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shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to notice of and to vote at such meeting.

Section 5. Adjournments. Any meeting of the stockholders may be adjourned from time to time to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting in accordance with the requirements of Section 4 of this Article II shall be given to each stockholder of record entitled to notice of and to vote at the meeting.

Section 6. Quorum. Unless otherwise required by applicable law or the Certificate of Incorporation, the holders of a majority of the Corporation's capital stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business. A quorum, once established, shall not be broken by the withdrawal of enough votes to leave less than a quorum. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, in the manner provided in Section 5 of this Article II, until a quorum shall be present or represented.

Section 7. Voting. Unless otherwise required by law, the Certificate of Incorporation or these Bylaws, any question brought before any meeting of the stockholders, other than the election of directors, shall be decided by the vote of the holders of a majority of the total number of votes of the Corporation's capital stock represented at the meeting and entitled to vote on such question, voting as a single class. Unless otherwise provided in the Certificate of Incorporation, and subject to Section 11(a) of this Article II, each stockholder represented at a meeting of the stockholders shall be entitled to cast one (1) vote for each share of the capital stock entitled to vote thereat held by such stockholder. Such votes may be cast in person or by proxy as provided in Section 8 of this Article II. The Board of Directors, in its discretion, or the officer of the Corporation presiding at a meeting of the stockholders, in such officer's discretion, may require that any votes cast at such meeting shall be cast by written ballot.

Section 8. Proxies. Each stockholder entitled to vote at a meeting of the stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder as proxy, but no such proxy shall be voted upon after three (3) years from its date, unless such proxy provides for a longer period. Without limiting the manner in which a stockholder may authorize another person or persons to act for such stockholder as proxy, the following shall constitute a valid means by which a stockholder may grant such authority:

(i) A stockholder may execute a writing authorizing another person or persons to act for such stockholder as proxy. Execution may be accomplished by the stockholder or such stockholder's authorized officer, director, employee or agent signing such writing or causing such person's signature to be affixed to such writing by any reasonable means, including, but not limited to, by facsimile signature.

(ii) A stockholder may authorize another person or persons to act for such stockholder as proxy by transmitting or authorizing the transmission of a facsimile to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or like agent duly authorized by the person who will be the holder of the proxy to receive such facsimile, provided that any such facsimile must either set forth or be submitted with information from which it can be determined that the facsimile was authorized by the stockholder. If it is determined that such facsimiles are valid, the inspectors or, if there are no inspectors, such other persons making that determination shall specify the information on which they relied.

Any copy, facsimile telecommunication or other reliable reproduction of the writing authorizing another person or persons to act as proxy for a stockholder may be substituted or used in lieu of the original writing, facsimile for any and all purposes for which the original writing, facsimile could be used; provided, that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing or facsimile telecommunication.

Section 9. Consent of Stockholders in Lieu of Meeting. Unless otherwise provided in the Certificate of Incorporation, any action required or permitted to be taken at any Annual or Special Meeting of Stockholders of the Corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within sixty (60) days of the earliest dated consent delivered in the manner required by this Section 9 to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the Corporation as provided above in this Section 9.

Section 10. List of Stockholders Entitled to Vote. The officer of the Corporation who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of the stockholders, a complete list of the stockholders entitled to vote at

the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting (a) either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held or (b) during ordinary business hours, at the principal place of business of the Corporation. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 11. Record Date.

(a) In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of the stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of the stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of the stockholders shall apply to any adjournment of the meeting; provided, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by applicable law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

Section 12. Stock Ledger. The stock ledger of the Corporation shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by

Section 10 of this Article II or the books of the Corporation, or to vote in person or by proxy at any meeting of the stockholders.

Section 13. Conduct of Meetings. The Board of Directors may adopt by resolution such rules and regulations for the conduct of any meeting of the stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the chairman of any meeting of the stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (a) the establishment of an agenda or order of business for the meeting; (b) the determination of when the polls shall open and close for any given matter to be voted on at the meeting; (c) rules and procedures for maintaining order at the meeting and the safety of those present; (d) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the chairman of the meeting shall determine; (e) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (f) limitations on the time allotted to questions or comments by participants.

ARTICLE III
DIRECTORS

Section 1. Number and Election of Directors. The Board of Directors shall consist of not less than one nor more than fifteen members, the exact number of which shall initially be fixed by the Incorporator and thereafter from time to time by the Board of Directors. Except as provided in Section 2 of this Article III, directors shall be elected by a majority of the votes cast at each Annual Meeting of Stockholders and each director so elected shall hold office until the next Annual Meeting of Stockholders and until such director's successor is duly elected and qualified, or until such director's earlier death, resignation or removal. Directors need not be stockholders.

Section 2. Vacancies. Unless otherwise required by law or the Certificate of Incorporation, vacancies on the Board of Directors or any committee thereof arising through death, resignation, removal, an increase in the number of directors constituting the Board of Directors or such committee or otherwise may be filled only by a majority of the directors then in office, though less than a quorum, or by a sole remaining director. The directors so chosen shall, in the case of the Board of Directors, hold office until the next annual election and until their successors are duly elected and qualified, or until their earlier death, resignation or removal and, in the case of any committee of the Board of Directors, shall hold office until their successors are duly appointed by the Board of Directors or until their earlier death, resignation or removal.

Section 3. Duties and Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these Bylaws required to be exercised or done by the stockholders.

Section 4. Meetings. The Board of Directors and any committee thereof may hold meetings, both regular and special, either within or without the State of Delaware. Regular meetings of the Board of Directors or any committee thereof may be held without notice at such time and at such place as may from time to time be determined by the Board of Directors or such committee, respectively. Special meetings of the Board of Directors may be called by the Chairman of the Board of Directors, if there be one, the President, or by any director. Special meetings of any committee of the Board of Directors may be called by the chairman of such committee, if there be one, the President, or any director serving on such committee. Notice thereof stating the place, date and hour of the meeting shall be given to each director (or, in the case of a committee, to each member of such committee) either by mail not less than forty-eight (48) hours before the date of the meeting, by telephone or facsimile on twenty-four (24) hours' notice, or on such shorter notice as the person or persons calling such meeting may deem necessary or appropriate in the circumstances.

Section 5. Organization. At each meeting of the Board of Directors or any committee thereof, the Chairman of the Board of Directors or the chairman of such committee, as the case may be, or, in his or her absence or if there be none, a director chosen by a majority of the directors present, shall act as chairman. Except as provided below, the Secretary of the Corporation shall act as secretary at each meeting of the Board of Directors and of each committee thereof. In case the Secretary shall be absent from any meeting of the Board of Directors or of any committee thereof, an Assistant Secretary shall perform the duties of secretary at such meeting; and in the absence from any such meeting of the Secretary and all the Assistant Secretaries, the chairman of the meeting may appoint any person to act as secretary of the meeting. Notwithstanding the foregoing, the members of each committee of the Board of Directors may appoint any person to act as secretary of any meeting of such committee and the Secretary or any Assistant Secretary of the Corporation may, but need not if such committee so elects, serve in such capacity.

Section 6. Resignations and Removals of Directors. Any director of the Corporation may resign from the Board of Directors or any committee thereof at any time, by giving notice in writing to the Chairman of the Board of Directors, if there be one, the President or the Secretary of the Corporation and, in the case of a committee, to the chairman of such committee, if there be one. Such resignation shall take effect at the time therein specified or, if no time is specified, immediately; and, unless otherwise specified in such notice, the acceptance of such resignation shall not be necessary to make it effective. Except as otherwise required by applicable law, (a) any director or the entire Board of Directors may be removed from office at any time by the affirmative vote of the holders of at least a

majority in voting power of the issued and outstanding capital stock of the Corporation entitled to vote in the election of directors, and (b) any director serving on a committee of the Board of Directors may be removed from such committee at any time by the Board of Directors.

Section 7. Quorum. Except as otherwise required by law or the Certificate of Incorporation, at all meetings of the Board of Directors or any committee thereof, a majority of the entire Board of Directors or a majority of the directors constituting such committee, as the case may be, shall constitute a quorum for the transaction of business and the act of a majority of the directors or committee members present at any meeting at which there is a quorum shall be the act of the Board of Directors or such committee, as applicable. If a quorum shall not be

present at any meeting of the Board of Directors or any committee thereof, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting of the time and place of the adjourned meeting, until a quorum shall be present.

Section 8. Actions of the Board by Written Consent. Unless otherwise provided in the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all the members of the Board of Directors or such committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board of Directors or such committee. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing.

Section 9. Meetings by Means of Conference Telephone. Unless otherwise provided in the Certificate of Incorporation or these Bylaws, members of the Board of Directors, or any committee thereof, may participate in a meeting of the Board of Directors or such committee by means of a conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this Section 9 shall constitute presence in person at such meeting.

Section 10. Committees. Unless otherwise required by the Certificate of Incorporation, (a) the Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the Corporation, (b) the Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of any such committee, and (c) in the absence or disqualification of a member of a committee, and in the absence of a designation by the Board of Directors of an alternate member to replace the absent or disqualified member, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another qualified member of the Board of Directors to act at the meeting in the place of any absent or disqualified member. Any committee, to the extent permitted by law and provided in the resolution establishing such committee, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers which may require it. Each committee shall keep regular minutes and report to the Board of Directors when required. Notwithstanding anything to the contrary contained in this Article III, the resolution of the Board of Directors establishing any committee of the Board of Directors and/or the charter of any such committee may establish requirements or procedures relating to the governance and/or operation of such committee that are different from, or in addition to, those set forth in these Bylaws and, to the extent that there is any inconsistency between these Bylaws and any such resolution or charter, the terms of such resolution or charter shall be controlling.

Section 11. Compensation. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary for service as director, payable in cash or securities. No such payment shall preclude any director from serving the Corporation in

any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for service as committee members.

Section 12. Interested Directors. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction, or solely because any such director's or officer's vote is counted for such purpose if: (a) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; (b) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (c) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

ARTICLE IV
OFFICERS

Section 1. General. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, a Secretary and a Treasurer. Any one or more individuals may hold such offices. The Board of Directors, in its discretion, also may choose a Chairman of the Board of Directors (who must be a director) and one or more Vice Presidents, Assistant Secretaries, Assistant Treasurers and other officers. Any number of offices may be held by the same person, unless otherwise prohibited by law, the Certificate of Incorporation or these Bylaws. The officers of the Corporation need not be stockholders of the Corporation nor, except in the case of the Chairman of the Board of Directors, need such officers be directors of the Corporation.

Section 2. Election. The Board of Directors, at its first meeting held after each Annual Meeting of Stockholders (or action by written consent of stockholders in lieu of the Annual Meeting of Stockholders), shall elect the officers of the Corporation who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors; and each officer of the Corporation shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal. Any officer elected by the Board of Directors (including, without limitation, the Chairman of the Board of Directors) may be removed at any time by the Board of Directors. Except as provided in Section 4 of this Article IV with regard to the Chairman of the Board of Directors, any vacancy occurring in any office of the Corporation shall be filled by the

Board of Directors. The salaries of all officers of the Corporation shall be fixed by the Board of Directors.

Section 3. Voting Securities Owned by the Corporation. Powers of attorney, proxies, waivers of notice of meeting, consents and other instruments relating to securities owned by the Corporation may be executed in the name of and on behalf of the Corporation by the President or any Vice President or any other officer authorized to do so by the Board of Directors and any such officer may, in the name of and on behalf of the Corporation, take all such action as any such officer may deem advisable to vote in person or by proxy at any meeting of security holders of any corporation in which the Corporation may own securities and at any such meeting shall possess and may exercise any and all rights and power incident to the ownership of such securities and which, as the owner thereof, the Corporation might have exercised and possessed if present. The Board of Directors may, by resolution, from time to time confer like powers upon any other person or persons.

Section 4. Chairman of the Board of Directors. The Chairman of the Board of Directors, if there be one, shall preside at all meetings of the stockholders and of the Board of Directors. The Chairman of the Board of Directors shall be designated by a majority of the Board of Directors and, except where by law the signature of the President is required, the Chairman of the Board of Directors shall possess the same power as the President to sign all contracts, certificates and other instruments of the Corporation which may be authorized by the Board of Directors. During the absence or disability of the President, the Chairman of the Board of Directors shall exercise all the powers and discharge all the duties of the President. The Chairman of the Board of Directors shall also perform such other duties and may exercise such other powers as may from time to time be assigned by these Bylaws or by the Board of Directors.

Section 5. President. The President shall, subject to the control of the Board of Directors and, if there be one, the Chairman of the Board of Directors, have general supervision of the business of the Corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. The President shall execute all bonds, mortgages, contracts and other instruments of the Corporation requiring a seal, under the seal of the Corporation, except where required or permitted by law to be otherwise signed and executed and except that the other officers of the Corporation may sign and execute documents when so authorized by these Bylaws, the Board of Directors or the President. In the absence or disability of the Chairman of the Board of Directors, or if there be none, the President shall preside at all meetings of the stockholders and, provided the President is also a director, the Board of Directors. Unless the Board of Directors designates otherwise, the President shall be the Chief Executive Officer of the Corporation. The President shall also perform such other duties and may exercise such other powers as may from time to time be assigned to such officer by these Bylaws or by the Board of Directors.

Section 6. Vice Presidents. At the request of the President or in the President's absence or in the event of the President's inability or refusal to act (and if there be no Chairman of the Board of Directors), the Vice President, or the Vice Presidents if there is more than one (in the order designated by the Board of Directors), shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the

President. Each Vice President shall perform such other duties and have such other powers as the Board of Directors from time to time may prescribe. If there be no Chairman of the Board of Directors and no Vice President, the Board of Directors shall designate the officer of the Corporation who, in the absence of the President or in the event of the inability or refusal of the President to act, shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President.

Section 7. Secretary. The Secretary shall attend all meetings of the Board of Directors and all meetings of the stockholders and record all the proceedings thereat in a book or books to be kept for that purpose; the Secretary shall also perform like duties for committees of the Board of Directors when required. The Secretary shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors, and shall perform such other duties as may be prescribed by the Board of

Directors, the Chairman of the Board of Directors or the President, under whose supervision the Secretary shall be. If the Secretary shall be unable or shall refuse to cause to be given notice of all meetings of the stockholders and special meetings of the Board of Directors, and if there be no Assistant Secretary, then either the Board of Directors or the President may choose another officer to cause such notice to be given. The Secretary shall have custody of the seal of the Corporation and the Secretary or any Assistant Secretary, if there be one, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by the signature of the Secretary or by the signature of any such Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest to the affixing by such officer's signature. The Secretary shall see that all books, reports, statements, certificates and other documents and records required by law to be kept or filed are properly kept or filed, as the case may be.

Section 8. Treasurer. The Treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and the Board of Directors, at its regular meetings, or when the Board of Directors so requires, an account of all transactions as Treasurer and of the financial condition of the Corporation. If required by the Board of Directors, the Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of the Treasurer and for the restoration to the Corporation, in case of the Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Treasurer's possession or under the Treasurer's control belonging to the Corporation.

Section 9. Assistant Secretaries. Assistant Secretaries, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Secretary, and in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, shall perform the duties of the Secretary, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Secretary.

Section 10. Assistant Treasurers. Assistant Treasurers, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Treasurer, and in the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, shall perform the duties of the Treasurer, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Treasurer. If required by the Board of Directors, an Assistant Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of Assistant Treasurer and for the restoration to the Corporation, in case of the Assistant Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Assistant Treasurer's possession or under the Assistant Treasurer's control belonging to the Corporation.

Section 11. Other Officers. Such other officers as the Board of Directors may choose shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors. The Board of Directors may delegate to any other officer of the Corporation the power to choose such other officers and to prescribe their respective duties and powers.

ARTICLE V
STOCK

Section 1. Form of Certificates. The Corporation may issue some or all of the shares of any or all of the Corporation's classes or series of Stock without certificates if authorized by the Board of Directors. In the event that the Corporation issues shares of stock represented by certificates, such certificates shall be in such form as prescribed by the Board of Directors or a duly authorized officer, shall contain the statements and information required by the General Corporation Law of the State of Delaware (the "DGCL") and shall be signed by the officers of the Corporation in the manner permitted by the DGCL. In the event that the Corporation issues shares of stock without certificates, to the extent then required by the DGCL, the Corporation shall provide to the record holders of such shares a written statement of the information required by the DGCL to be included on stock certificates. There shall be no differences in the rights and obligations of stockholders based on whether or not their shares are represented by certificates. If a class or series of stock is authorized by the Board of Directors to be issued without certificates, no stockholder shall be entitled to a certificate of certificates representing any shares of such class or series of stock held by such stockholder unless otherwise determined by the Board of Directors and then only upon written request by such stockholder to the Secretary.

Section 2. Signatures. Any or all of the signatures on a certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

Section 3. Lost Certificates. The Board of Directors may direct a new certificate to be issued in place of any certificate theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the

certificate of stock to be lost, stolen or destroyed; provided, that if such shares have ceased to be certificated no new certificate shall be issued unless requested in writing by such stockholder and the Board of Directors has determined that such certificates may be issued.

When authorizing such issuance of a new certificate, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate, or such owner's legal representative, to advertise the same in such manner as the Board of Directors shall require and/or to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate or the issuance of such new certificate.

Section 4. Transfers. Stock of the Corporation shall be transferable in the manner prescribed by applicable law and in these Bylaws. Transfers of stock shall be made on the books of the Corporation only by the record holder of the shares or by such person's attorney lawfully constituted in writing and, if such shares are certificated, upon the surrender of the certificate therefor, properly endorsed for transfer and payment of all necessary transfer taxes; provided, that such surrender and endorsement or payment of taxes shall not be required in any case in which the officers of the Corporation shall determine to waive such requirement. Every certificate exchanged, returned or surrendered to the Corporation shall be marked "Cancelled," with the date of cancellation, by the Secretary or Assistant Secretary of the Corporation or the transfer agent thereof. No transfer of stock shall be valid as against the Corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing from and to whom transferred.

Section 5. Dividend Record Date. Except as otherwise set forth in the Certificate of Incorporation, in order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 6. Record Owners. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise required by law.

Section 7. Transfer and Registry Agents. The Corporation may from time to time maintain one or more transfer offices or agencies and registry offices or agencies at such place or places as may be determined from time to time by the Board of Directors.

ARTICLE VI
NOTICES

Section 1. Notices. Whenever written notice is required by law, the Certificate of Incorporation or these Bylaws, to be given to any director, member of a committee or stockholder, such notice may be given by mail, addressed to such director, member of a committee or stockholder, at such person's address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Written notice may also be given personally or by facsimile, telegram, telex or cable.

Section 2. Waivers of Notice. Whenever any notice is required by applicable law, the Certificate of Incorporation or these Bylaws, to be given to any director, member of a committee or stockholder, a waiver thereof in writing, signed by the person or persons entitled to notice, whether before or after the time stated therein, shall be deemed equivalent thereto. Attendance of a person at a meeting, present in person or represented by proxy, shall constitute a waiver of notice of such meeting, except where the person attends the meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any Annual or Special Meeting of Stockholders or any regular or special meeting of the directors or members of a committee of directors need be specified in any written waiver of notice unless so required by law, the Certificate of Incorporation or these Bylaws.

ARTICLE VII
GENERAL PROVISIONS

Section 1. Dividends. Dividends upon the capital stock of the Corporation, subject to the requirements of the DGCL and the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting of the Board of Directors (or any action by written consent in lieu thereof in accordance with Section 8 of Article III hereof), and may be paid in cash, in property, or in shares of the Corporation's capital stock. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, deems proper as a reserve or reserves to meet contingencies, or for purchasing any of the shares of capital stock, warrants, rights, options, bonds, debentures, notes, scrip or other securities or evidences of indebtedness of the Corporation, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for any proper purpose, and the Board of Directors may modify or abolish any such reserve.

Section 2. Disbursements. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 3. Fiscal Year. The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

Section 4. Corporate Seal. The Board of Directors may authorize the adoption of a seal by the Corporation. Any such seal shall contain the name of the Corporation and the year of its incorporation and the words "Corporate Seal, Delaware." The Board of Directors may authorize one or more duplicate seals and provide for the custody thereof. The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

Section 5. Affixing Seal. Whenever the Corporation is permitted or required to affix its seal to a document, it shall be sufficient to meet the requirements of any law, rule or regulation relating to a seal to place the word "(SEAL)" adjacent to the signature of the person authorized to execute the document on behalf of the Corporation.

ARTICLE VIII
INDEMNIFICATION

Section 1. Power to Indemnify in Actions, Suits or Proceedings other than Those by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that such person is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

Section 2. Power to Indemnify in Actions, Suits or Proceedings by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite

the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 3. Authorization of Indemnification. Any indemnification under this Article VIII (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the present or former director or officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Such determination shall be made, with respect to a person who is a director or officer at the time of such determination, (a) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, (b) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, (c) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (d) by the stockholders. Such determination shall be made, with respect to former directors and officers, by any person or persons having the authority to act on the matter on behalf of the Corporation. To the extent, however, that a present or former director or officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described above, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith, without the necessity of authorization in the specific case.

Section 4. Good Faith Defined. For purposes of any determination under Section 3 of this Article VIII, a person shall be deemed to have acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, or, with respect to any criminal action or proceeding, to have had no reasonable cause to believe such person's conduct was unlawful, if such person's action is based on the records or books of account of the Corporation or another enterprise, or on information supplied to such person by the officers of the Corporation or another enterprise in the course of their duties, or on the advice of legal counsel for the Corporation or another enterprise or on information or records given or reports made to the Corporation or another enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Corporation or another enterprise. The provisions of this Section 4 shall not be deemed to be exclusive or to limit in any way the circumstances in which a person may be deemed to have met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be.

Section 5. Indemnification by a Court. Notwithstanding any contrary determination in the specific case under Section 3

of this Article VIII, and notwithstanding the absence of any determination thereunder, any director or officer may apply to the Court of Chancery of the State of Delaware or any other court of competent jurisdiction in the State of Delaware for indemnification to the extent otherwise permissible under Section 1 or Section 2 of this Article VIII. The basis of such indemnification by a court shall be a determination by such court that indemnification of the director or officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Neither a contrary determination in the specific case under Section 3 of this Article VIII nor the absence of any determination thereunder shall be a defense to such application or create a presumption that the director or officer seeking indemnification has not

met any applicable standard of conduct. Notice of any application for indemnification pursuant to this Section 5 shall be given to the Corporation promptly upon the filing of such application. If successful, in whole or in part, the director or officer seeking indemnification shall also be entitled to be paid the expense of prosecuting such application.

Section 6. Expenses Payable in Advance. Expenses (including attorneys' fees) incurred by a director or officer in defending any civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VIII. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate.

Section 7. Nonexclusivity of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the Certificate of Incorporation, these By-Laws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office, it being the policy of the Corporation that indemnification of the persons specified in Section 1 and Section 2 of this Article VIII shall be made to the fullest extent permitted by law. The provisions of this Article VIII shall not be deemed to preclude the indemnification of any person who is not specified in Section 1 or Section 2 of this Article VIII but whom the Corporation has the power or obligation to indemnify under the provisions of the DGCL, or otherwise.

Section 8. Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power or the obligation to indemnify such person against such liability under the provisions of this Article VIII.

Section 9. Certain Definitions. For purposes of this Article VIII, references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors or officers, so that any person who is or was a director or officer of such constituent corporation, or is or was a director or officer of such constituent corporation serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VIII with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. The term "another enterprise" as used in this Article VIII shall mean any other corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise of

which such person is or was serving at the request of the Corporation as a director, officer, employee or agent. For purposes of this Article VIII, references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the Corporation" shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director or officer with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the Corporation" as referred to in this Article VIII.

Section 10. Survival of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director or officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

Section 11. Limitation on Indemnification. Notwithstanding anything contained in this Article VIII to the contrary, except for proceedings to enforce rights to indemnification (which shall be governed by Section 5 of this Article VIII), the Corporation shall not be obligated to indemnify any director or officer (or his or her heirs, executors or personal or legal representatives) or advance expenses in connection with a proceeding (or part thereof) initiated by such person unless such proceeding (or part thereof) was authorized or consented to by the Board of Directors.

Section 12. Indemnification of Employees and Agents. The Corporation may, to the extent authorized from time to time

by the Board of Directors, provide rights to indemnification and to the advancement of expenses to employees and agents of the Corporation similar to those conferred in this Article VIII to directors and officers of the Corporation.

ARTICLE IX
MISCELLANEOUS

Section 1. Amendments. Unless otherwise required by the Certificate of Incorporation, these Bylaws may be altered, amended or repealed, in whole or in part, or new Bylaws may be adopted by the stockholders or by the Board of Directors; provided, that notice of such alteration, amendment, repeal or adoption of new Bylaws be contained in the notice of such meeting of the stockholders or Board of Directors, as the case may be. All such amendments must be approved by either the holders of a majority of the outstanding capital stock entitled to vote thereon or by a majority of the entire Board of Directors then in office.

Section 2. Entire Board of Directors. As used in this Article IX and in these Bylaws generally, the term "entire Board of Directors" means the total number of directors which the Corporation would have if there were no vacancies.

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Adopted as of: March 17, 2011

AMENDED AND RESTATED BYLAWS
OF
CERECOR INC.
(A DELAWARE CORPORATION)

CERECOR INC.
AMENDED AND RESTATED
BYLAWS

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office shall be established and maintained at the office of Corporation Service Company, in the City of Wilmington, in the County of New Castle, in the State of Delaware, and said corporation, or other such person or entity as the Board of Directors may from time to time designate, shall be the registered agent of the corporation.

Section 2. Other Offices. The corporation shall also have and maintain an office or principal place of business at such place as may be fixed by the Board of Directors, and may also have offices at such other places, both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II

CORPORATE SEAL

Section 3. Corporate Seal. The Board of Directors may adopt a corporate seal. If adopted, the corporate seal shall consist of a die bearing the name of the corporation and the inscription, "Corporate Seal-Delaware." Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE III

STOCKHOLDERS' MEETINGS

Section 4. Place Of Meetings. Meetings of the stockholders of the corporation may be held at such place, either within or without the State of Delaware, as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided under the Delaware General Corporation Law (the "***DGCL***").

Section 5. Annual Meetings.

(a) The annual meeting of the stockholders of the corporation, for the purpose of election of directors and for such other business as may properly come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. Nominations of persons for election to the Board of Directors of the corporation and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i) pursuant to the corporation's notice of meeting of stockholders (with respect to

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business other than nominations); (ii) brought specifically by or at the direction of the Board of Directors; or (iii) by any stockholder of the corporation who was a stockholder of record at the time of giving the stockholder's notice provided for in Section 5(b) below, who is entitled to vote at the meeting and who complied with the notice procedures set forth in this Section 5. For the avoidance of doubt, clause (iii) above shall be the exclusive means for a stockholder to make nominations and submit other business (other than matters properly included in the corporation's notice of meeting of stockholders and proxy statement under Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (the "***1934 Act***")) before an annual meeting of stockholders.

(b) At an annual meeting of the stockholders, only such business shall be conducted as is a proper matter for stockholder action under Delaware law and as shall have been properly brought before the meeting.

(1) For nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(3) and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A) as to each nominee such stockholder proposes to nominate at the meeting: (1) the name, age, business address and residence address of such

nominee, (2) the principal occupation or employment of such nominee, (3) the class and number of shares of each class of capital stock of the corporation which are owned of record and beneficially by such nominee, (4) the date or dates on which such shares were acquired and the investment intent of such acquisition and (5) such other information concerning such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved), or that is otherwise required to be disclosed pursuant to Section 14 of the 1934 Act and the rules and regulations promulgated thereunder (including such person's written consent to being named as a nominee and to serving as a director if elected); and (B) the information required by Section 5(b)(4). The corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such proposed nominee.

(2) Other than proposals sought to be included in the corporation's proxy materials pursuant to Rule 14a-8 under the 1934 Act, for business other than nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(3), and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A) as to each matter such stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest (including any anticipated benefit of such business to any Proponent (as defined below) other than solely as a result of its ownership of the corporation's capital stock, that is material to any Proponent individually, or to the Proponents in the

aggregate) in such business of any Proponent; and (B) the information required by Section 5(b)(4).

(3) To be timely, the written notice required by Section 5(b)(1) or 5(b)(2) must be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one hundred twentieth (120th) day prior to the first anniversary of the preceding year's annual meeting; *provided, however,* that, subject to the last sentence of this Section 5(b)(3), in the event that the date of the annual meeting is advanced more than thirty (30) days prior to or delayed by more than thirty (30) days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the one hundred twentieth (120th) day prior to such annual meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made. In no event shall an adjournment or a postponement of an annual meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(4) The written notice required by Section 5(b)(1) or 5(b)(2) shall also set forth, as of the date of the notice and as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (each, a "***Proponent***" and collectively, the "***Proponents***"): (A) the name and address of each Proponent, as they appear on the corporation's books; (B) the class, series and number of shares of the corporation that are owned beneficially and of record by each Proponent; (C) a description of any agreement, arrangement or understanding (whether oral or in writing) with respect to such nomination or proposal between or among any Proponent and any of its affiliates or associates, and any others (including their names) acting in concert, or otherwise under the agreement, arrangement or understanding, with any of the foregoing; (D) a representation that the Proponents are holders of record or beneficial owners, as the case may be, of shares of the corporation entitled to vote at the meeting and intend to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice (with respect to a notice under Section 5(b)(1)) or to propose the business that is specified in the notice (with respect to a notice under Section 5(b)(2)); (E) a representation as to whether the Proponents intend to deliver a proxy statement and form of proxy to holders of a sufficient number of holders of the corporation's voting shares to elect such nominee or nominees (with respect to a notice under Section 5(b)(1)) or to carry such proposal (with respect to a notice under Section 5(b)(2)); (F) to the extent known by any Proponent, the name and address of any other stockholder supporting the proposal on the date of such stockholder's notice; and (G) a description of all Derivative Transactions (as defined below) by each Proponent during the previous twelve (12) month period, including the date of the transactions and the class, series and number of securities involved in, and the material economic terms of, such Derivative Transactions.

For purposes of Sections 5 and 6, a "***Derivative Transaction***" means any agreement, arrangement, interest or understanding entered into by, or on behalf or for the benefit of, any Proponent or any of its affiliates or associates, whether record or beneficial:

(w) the value of which is derived in whole or in part from the value of any class or series of shares or other securities of the corporation,

(x) which otherwise provides any direct or indirect opportunity to gain or share in any gain derived from a change in the value of securities of the corporation,

(y) the effect or intent of which is to mitigate loss, manage risk or benefit of security value or price changes, or

(z) which provides the right to vote or increase or decrease the voting power of, such Proponent, or any of its affiliates or associates, with respect to any securities of the corporation,

which agreement, arrangement, interest or understanding may include, without limitation, any option, warrant, debt position, note, bond, convertible security, swap, stock appreciation right, short position, profit interest, hedge, right to dividends, voting agreement, performance-related fee or arrangement to borrow or lend shares (whether or not subject to payment, settlement, exercise or conversion in any such class or series), and any proportionate interest of such Proponent in the securities of the corporation held by any general or limited partnership, or any limited liability company, of which such Proponent is, directly or indirectly, a general partner or managing member.

(c) A stockholder providing written notice required by Section 5(b)(1) or (2) shall update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for the meeting and (ii) the date that is five (5) business days prior to the meeting and, in the event of any adjournment or postponement thereof, five (5) business days prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than five (5) business days after the record date for the meeting. In the case of an update and supplement pursuant to clause (ii) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than two (2) business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two (2) business days prior to such adjourned or postponed meeting.

(d) Notwithstanding anything in Section 5(b)(3) to the contrary, in the event that the number of directors in an Expiring Class is increased and there is no public announcement of the appointment of a director to such class, or, if no appointment was made, of the vacancy in such class, made by the corporation at least ten (10) days before the last day a stockholder may deliver a notice of nomination in accordance with Section 5(b)(3), a stockholder's notice required by this Section 5 and which complies with the requirements in Section 5(b)(1), other than the timing requirements in Section 5(b)(3), shall also be considered timely, but only with respect to nominees for any new positions in such Expiring Class created by such increase, if it shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the corporation. For purposes of this section,

an "***Expiring Class***" shall mean a class of directors whose term shall expire at the next annual meeting of stockholders.

(e) A person shall not be eligible for election or re-election as a director unless the person is nominated either in accordance with clause (ii) of Section 5(a), or in accordance with clause (iii) of Section 5(a). Except as otherwise required by law, the chairman of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, or the Proponent does not act in accordance with the representations in Sections 5(b)(4)(D) and 5(b)(4)(E), to declare that such proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded, notwithstanding that proxies in respect of such nominations or such business may have been solicited or received.

(f) Notwithstanding the foregoing provisions of this Section 5, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to proposals and/or nominations to be considered pursuant to Section 5(a)(iii) of these Bylaws.

(g) For purposes of Sections 5 and 6,

(1) "***public announcement***" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act; and

(2) "***affiliates***" and "***associates***" shall have the meanings set forth in Rule 405 under the Securities Act of 1933, as amended (the "***1933 Act***").

Section 6. Special Meetings.

(a) Special meetings of the stockholders of the corporation may be called, for any purpose as is a proper matter for stockholder action under Delaware law, by (i) the Chairman of the Board of Directors, (ii) the Chief Executive Officer, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption).

(b) The Board of Directors shall determine the time and place, if any, of such special meeting. Upon determination of the time and place, if any, of the meeting, the Secretary shall cause a notice of meeting to be given to the stockholders entitled to vote, in accordance

with the provisions of Section 7 of these Bylaws. No business may be transacted at such special meeting otherwise than specified in the notice of meeting.

(c) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the corporation who is a stockholder of record at the time of giving notice provided for in this paragraph, who shall be entitled to vote at the meeting and who delivers written notice to the Secretary of the corporation setting forth the information required by Section 5(b)(1). In the event the corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder of record may nominate a person or persons (as the case may be), for election to such position(s) as specified in the corporation's notice of meeting, if written notice setting forth the information required by Section 5(b)(1) of these Bylaws shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the later of the ninetieth (90^{th}) day prior to such meeting or the tenth (10^{th}) day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. The stockholder shall also update and supplement such information as required under Section 5(c). In no event shall an adjournment or a postponement of a special meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(d) Notwithstanding the foregoing provisions of this Section 6, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder with respect to matters set forth in this Section 6. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to nominations for the election to the Board of Directors to be considered pursuant to Section 6(c) of these Bylaws.

Section 7. Notice Of Meetings. Except as otherwise provided by law, notice, given in writing or by electronic transmission, of each meeting of stockholders shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting, such notice to specify the place, if any, date and hour, in the case of special meetings, the purpose or purposes of the meeting, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at any such meeting. If mailed, notice is deemed given when deposited in the U.S. mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof, or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by his, her or its attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting

shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

Section 8. Quorum. At all meetings of stockholders, except where otherwise provided by statute or by the Certificate of Incorporation, or by these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairman of the meeting or by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by statute or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of the majority of shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by the statute or by the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute or by the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of shares of such class or classes or series present in person, by remote communication, if applicable, or represented by proxy at the meeting shall be the act of such class or classes or series.

Section 9. Adjournment And Notice Of Adjourned Meetings. Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairman of the meeting or by the vote of a majority of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting. When a meeting is adjourned to another time or place, if any, notice need not be given of the adjourned meeting if the time and place, if any, thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 10. Voting Rights. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only persons in whose names shares stand on the stock records of the corporation on the record date, as provided in Section 12 of these Bylaws, shall be entitled to vote at any meeting of stockholders. Every person entitled

to vote shall have the right to do so either in person, by remote communication, if applicable, or by an agent or agents authorized by a proxy granted in

accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three (3) years from its date of creation unless the proxy provides for a longer period.

Section 11. Joint Owners Of Stock. If shares or other securities having voting power stand of record in the names of two (2) or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two (2) or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (a) if only one (1) votes, his or her act binds all; (b) if more than one (1) votes, the act of the majority so voting binds all; (c) if more than one (1) votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in the DGCL, Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of subsection (c) shall be a majority or even-split in interest.

Section 12. List Of Stockholders. The Secretary shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. The list shall be open to examination of any stockholder during the time of the meeting as provided by law.

Section 13. Action Without Meeting. No action shall be taken by the stockholders except at an annual or special meeting of stockholders called in accordance with these Bylaws, and no action shall be taken by the stockholders by written consent or by electronic transmission.

Section 14. Organization.

(a) At every meeting of stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the President, or, if the President is absent, a chairman of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairman. The Secretary, or, in his or her absence, an Assistant Secretary directed to do so by the President, shall act as secretary of the meeting.

(b) The Board of Directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are

necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies and such other persons as the chairman shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting on matters which are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

ARTICLE IV

DIRECTORS

Section 15. Number And Term Of Office. The authorized number of directors of the corporation shall be fixed in accordance with the Certificate of Incorporation. Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws.

Section 16. Powers. The powers of the corporation shall be exercised, its business conducted and its property controlled by the Board of Directors, except as may be otherwise provided by statute or by the Certificate of Incorporation.

Section 17. Classes of Directors. Subject to the rights of the holders of any series of Preferred Stock to elect additional

directors under specified circumstances, immediately following the closing of the initial public offering pursuant to an effective registration statement under the 1933 Act covering the offer and sale of Common Stock to the public (the "***Initial Public Offering***"), the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this Section 17, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation

or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Section 18. Vacancies. Unless otherwise provided in the Certificate of Incorporation, and subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders, *provided, however*, that whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Bylaw in the case of the death, removal or resignation of any director.

Section 19. Resignation. Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time. If no such specification is made, it shall be deemed effective at the time of delivery to the Secretary. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each Director so chosen shall hold office for the unexpired portion of the term of the Director whose place shall be vacated and until his or her successor shall have been duly elected and qualified.

Section 20. Removal.

(a) Subject to the rights of holders of any series of Preferred Stock to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause.

(b) Subject to any limitation imposed by law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all then outstanding shares of capital stock of the corporation entitled to vote generally at an election of directors.

Section 21. Meetings.

(a) Regular Meetings. Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware which has been designated by the Board of Directors and publicized among all directors, either orally or in writing, by telephone, including a voice-messaging system or other system designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means. No further notice shall be required for regular meetings of the Board of Directors.

(b) Special Meetings. Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by the Chairman of the Board, the Chief Executive Officer or a majority of the authorized number of directors.

(c) Meetings by Electronic Communications Equipment. Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) Notice of Special Meetings. Notice of the time and place of all special meetings of the Board of Directors shall be orally or in writing, by telephone, including a voice messaging system or other system or technology designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means, during normal business hours, at least twenty-four (24) hours before the date and time of the meeting. If notice is sent by US mail, it shall be sent by first class mail, charges prepaid, at least three (3) days before the date of the meeting. Notice of any meeting may be waived in writing, or by electronic transmission, at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

(e) Waiver of Notice. The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though it had been transacted at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present who did not receive notice shall sign a written waiver of notice or shall waive notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 22. Quorum And Voting.

(a) Unless the Certificate of Incorporation requires a greater number, and except with respect to questions related to indemnification arising under Section 43 herein for which a quorum shall be one-third of the exact number of directors fixed from time to time, a quorum of the Board of Directors shall consist of a majority of the exact number of directors

fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation; *provided, however,* at any meeting whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by the affirmative vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation or these Bylaws.

Section 23. Action Without Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 24. Fees And Compensation. Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor.

Section 25. Committees.

(a) Executive Committee. The Board of Directors may appoint an Executive Committee to consist of one (1) or more members of the Board of Directors. The Executive Committee, to the extent permitted by law and provided in the resolution of the Board of Directors shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any Bylaw of the corporation.

(b) Other Committees. The Board of Directors may, from time to time, appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall consist of one (1) or more members of the Board of Directors and shall have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) Term. The Board of Directors, subject to any requirements of any outstanding series of Preferred Stock and the provisions of subsections (a) or (b) of this Section 25, may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his or her death or voluntary resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence

or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) Meetings. Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 25 shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Special meetings of any such committee may be held at any place which has been determined from time to time by such committee, and may be called by any director who is a member of such committee, upon notice to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such special meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

Section 26. Organization. At every meeting of the directors and stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the Chief Executive Officer (if a director), or, if a Chief Executive Officer is absent, the President (if a director), or if the President is absent, the most senior Vice President (if a director), or, in the absence of any such person, a chairman of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his or her absence, any Assistant Secretary or other officer or director directed to do so by the President, shall act as secretary of the meeting. The Chairman of the Board of Directors shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

ARTICLE V

OFFICERS

Section 27. Officers Designated. The officers of the corporation shall include, if and when designated by the Board of Directors, the Chairman of the Board of Directors (provided that notwithstanding anything to the contrary contained in these Bylaws, the Chairman of the Board of Directors shall not be deemed an officer of the corporation unless so designated by the Board of Directors), the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer and the Treasurer. The Board of Directors may also appoint one or more Assistant Secretaries and Assistant Treasurers and such other officers and agents with such powers and duties as it shall deem necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the corporation shall be fixed by or in the manner designated by the Board of Directors.

Section 28. Tenure And Duties Of Officers.

(a) General. All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors.

(b) Duties of Chief Executive Officer. The Chief Executive Officer shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors has been appointed and is present. Unless an officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. To the extent that a Chief Executive Officer has been appointed and no President has been appointed, all references in these Bylaws to the President shall be deemed references to the Chief Executive Officer. The Chief Executive Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(c) Duties of President. The President shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors or the Chief Executive Officer has been appointed and is present. Unless another officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The President shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(d) Duties of Vice Presidents. The Vice Presidents may assume and perform the duties of the President in the

absence or disability of the President or whenever the office of President is vacant. The Vice Presidents shall perform other duties commonly incident to their office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or, if the Chief Executive Officer has not been appointed or is absent, the President shall designate from time to time.

(e) Duties of Secretary. The Secretary shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts and proceedings thereof in the minute book of the corporation. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall perform all other duties provided for in these Bylaws and other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time. The President may direct any Assistant Secretary or other officer to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(f) Duties of Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Chief Financial Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. To the extent that a Chief Financial Officer has been appointed and no Treasurer has been appointed, all references in these Bylaws to the Treasurer shall be deemed references to the Chief Financial Officer. The President may direct the Treasurer, if any, or any Assistant Treasurer, or the Controller or any Assistant Controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each Controller and Assistant Controller shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(g) Duties of Treasurer. Unless another officer has been appointed Chief Financial Officer of the corporation, the Treasurer shall be the chief financial officer of the corporation and shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President, and, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Treasurer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

Section 29. Delegation Of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

Section 30. Resignations. Any officer may resign at any time by giving notice in writing or by electronic transmission to the Board of Directors or to the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the corporation under any contract with the resigning officer.

Section 31. Removal. Any officer may be removed from office at any time, either with or without cause, by the affirmative vote of a majority of the directors in office at the time, or by the unanimous written consent of the directors in office at the time, or by any committee or by the Chief Executive Officer or other superior officers upon whom such power of removal may have been conferred by the Board of Directors.

ARTICLE VI

EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES OWNED BY THE CORPORATION

Section 32. Execution Of Corporate Instruments. The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute on behalf of the corporation any corporate instrument or document, or to sign on behalf of the corporation the corporate name without limitation, or to enter into contracts on behalf of the corporation, except where otherwise provided by law or these Bylaws, and such execution or signature shall be binding upon the corporation.

All checks and drafts drawn on banks or other depositaries on funds to the credit of the corporation or in special accounts of the corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do.

Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

Section 33. Voting Of Securities Owned By The Corporation. All stock and other securities of other corporations owned or held by the corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairman of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

ARTICLE VII

SHARES OF STOCK

Section 34. Form And Execution Of Certificates. The shares of the corporation shall be represented by certificates, or shall be uncertificated if so provided by resolution or resolutions of the Board of Directors. Certificates for the shares of stock, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock represented by certificate in the corporation shall be entitled to have a certificate signed by or in the name of the corporation by the Chairman of the Board of Directors, or the President or any Vice President and by the Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

Section 35. Lost Certificates. A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or destroyed certificate or certificates, or the owner's legal representative, to agree to indemnify the corporation in such manner as it shall require or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen, or destroyed.

Section 36. Transfers.

(a) Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by attorney duly authorized, and, in the case of stock represented by certificate, upon the surrender of a properly endorsed certificate or certificates for a like number of shares.

(b) The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

Section 37. Fixing Record Dates.

(a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for

determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however,* that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 38. Registered Stockholders. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VIII

OTHER SECURITIES OF THE CORPORATION

Section 39. Execution Of Other Securities. All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 34), may be signed by the Chairman of the Board of Directors, the President or any Vice

President, or such other person as may be authorized by the Board of Directors, and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Chief Financial Officer or Treasurer or an Assistant Treasurer; *provided, however,* that where any such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible facsimile signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the corporation and issued and delivered as though the person who signed the same

or whose facsimile signature shall have been used thereon had not ceased to be such officer of the corporation.

ARTICLE IX

DIVIDENDS

Section 40. Declaration Of Dividends. Dividends upon the capital stock of the corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law.

Section 41. Dividend Reserve. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE X

FISCAL YEAR

Section 42. Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI

INDEMNIFICATION

Section 43. Indemnification Of Directors, Officers, Employees And Other Agents.

(a) Directors. The corporation shall indemnify its directors to the fullest extent not prohibited by the DGCL or any other applicable law; *provided, however,* that the corporation may modify the extent of such indemnification by individual contracts with its directors; and, *provided, further,* that the corporation shall not be required to indemnify any director in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors of the corporation, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the DGCL or any other applicable law or (iv) such indemnification is required to be made under subsection (d).

(b) Officers, Employees and Other Agents. The corporation shall have power to indemnify its officers, employees and other agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination

of whether indemnification shall be given to any such person to such officers or other persons as the Board of Directors shall determine.

(c) Expenses. The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director in connection with such proceeding; *provided, however*, that, if the DGCL requires, an advancement of expenses incurred by a director in his or her capacity as a director (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the corporation of an undertaking, by or on behalf of such indemnitee, to repay all amounts so advanced if it shall

ultimately be determined by final judicial decision from which there is no further right to appeal that such indemnitee is not entitled to be indemnified for such expenses under this section or otherwise.

(d) Enforcement. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors under this Bylaw shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the corporation and the director. Any right to indemnification or advances granted by this Bylaw to a director shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within ninety (90) days of request therefor. To the extent permitted by law, the claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting the claim. In connection with any claim for indemnification, the corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the DGCL or any other applicable law for the corporation to indemnify the claimant for the amount claimed. Neither the failure of the corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because the director has met the applicable standard of conduct set forth in the DGCL or any other applicable law, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct. In any suit brought by a director to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of proving that the director is not entitled to be indemnified, or to such advancement of expenses, under this section or otherwise shall be on the corporation.

(e) Non-Exclusivity of Rights. The rights conferred on any person by this Bylaw shall not be exclusive of any other right which such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding office. The corporation is specifically

authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the DGCL, or by any other applicable law.

(f) Survival of Rights. The rights conferred on any person by this Bylaw shall continue as to a person who has ceased to be a director and shall inure to the benefit of the heirs, executors and administrators of such a person.

(g) Insurance. To the fullest extent permitted by the DGCL or any other applicable law, the corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this section.

(h) Amendments. Any repeal or modification of this section shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

(i) Saving Clause. If this Bylaw or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each director to the full extent not prohibited by any applicable portion of this section that shall not have been invalidated, or by any other applicable law. If this section shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director to the full extent under any other applicable law.

(j) Certain Definitions. For the purposes of this Bylaw, the following definitions shall apply:

(1) The term “proceeding” shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

(2) The term “expenses” shall be broadly construed and shall include, without limitation, court costs, attorneys’ fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding.

(3) The term the “corporation” shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this section with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

(4) References to a “director,” “executive officer,” “officer,” “employee,” or “agent” of the corporation

shall include, without limitation, situations where such person is serving at the request of the corporation as, respectively, a director, executive officer, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

(5) References to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the corporation" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this section.

ARTICLE XII

NOTICES

Section 44. Notices.

(a) Notice To Stockholders. Written notice to stockholders of stockholder meetings shall be given as provided in Section 7 herein. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by law, written notice to stockholders for purposes other than stockholder meetings may be sent by U.S. mail or nationally recognized overnight courier, or by facsimile, telegraph or telex or by electronic mail or other electronic means.

(b) Notice To Directors. Any notice required to be given to any director may be given by the method stated in subsection (a), as otherwise provided in these Bylaws, or by overnight delivery service, facsimile, telex or telegram, except that such notice other than one which is delivered personally shall be sent to such address as such director shall have filed in writing with the Secretary, or, in the absence of such filing, to the last known post office address of such director.

(c) Affidavit Of Mailing. An affidavit of mailing, executed by a duly authorized and competent employee of the corporation or its transfer agent appointed with respect to the class of stock affected, or other agent, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(d) Methods of Notice. It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may

be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(e) Notice To Person With Whom Communication Is Unlawful. Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(f) Notice to Stockholders Sharing an Address. Except as otherwise prohibited under DGCL, any notice given under the provisions of DGCL, the Certificate of Incorporation or the Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the corporation within sixty (60) days of having been given notice by the corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the corporation.

ARTICLE XIII

AMENDMENTS

Section 45. Bylaw Amendments. Subject to the limitations set forth in Section 43(h) of these Bylaws or the provisions of the Certificate of Incorporation, the Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the corporation. Any adoption, amendment or repeal of the Bylaws of the corporation by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders also shall have power to adopt, amend or repeal the Bylaws of the corporation; *provided*, *however*, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class.

ARTICLE XIV

LOANS TO OFFICERS OR EMPLOYEES

Section 46. Loans To Officers Or Employees. Except as otherwise prohibited by applicable law, including the Sarbanes-Oxley Act of 2002, the corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the

corporation or of its subsidiaries, including any officer or employee who is a director of the corporation or its subsidiaries, whenever, in the judgment of the Board of Directors, such loan, guarantee or assistance may reasonably be expected to benefit the corporation. The loan, guarantee or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing in these Bylaws shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

Exhibit 5.1

September 4, 2015

Cerecor Inc.
400 E. Pratt Street, Suite 606
Baltimore, Maryland 21202

RE: Cerecor Inc., Registration Statement on Form S-1 (Registration No. 333-204905)

Ladies and Gentlemen:

We have acted as counsel to Cerecor Inc., a Delaware corporation (the "Company"), in connection with its filing of the Registration Statement on Form S-1 (as amended prior to be declared effective, the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), with the Securities and Exchange Commission (the "Commission") referenced above. The Registration Statement relates to the proposed offering and sale of up to $34,057,688 of shares of common stock, par value $0.001 per share (the "Common Stock"), of the Company, including shares that may be purchased by the underwriters pursuant to an option to purchase additional shares of Common Stock (the "Shares"). The number of Shares shall include all shares of Common Stock registered in connection with the offering contemplated by the Registration Statement, including any additional shares of Common Stock registered by the Company pursuant to Rule 462(b) under the Act.

In connection with this opinion letter, we have examined the Registration Statement and originals, or copies certified or otherwise identified to our satisfaction of the Company's Certificate of Incorporation and Bylaws and such other documents, records and instruments as we have deemed appropriate for purposes of the opinion set forth herein.

We have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of the documents submitted to us as originals, the conformity with the originals of all documents submitted to us as certified, facsimile, or photostatic copies and the authenticity of the originals of all documents submitted to us as copies.

Based upon the foregoing, we are of the opinion that the Shares have been duly authorized by the Company and, when issued and sold by the Company and delivered by the Company against receipt of the purchase price thereof, at a price not less than the par value of the Common Stock and not less than a price per share at which the total number of Shares would exceed the total number of shares of Common Stock available under the Company's Certificate of Incorporation, in the manner contemplated by the Registration Statement, will be validly issued, fully paid and non-assessable.

The opinions expressed herein are limited to Delaware General Corporation Law.

We hereby consent to the use of this opinion as Exhibit 5.1 to the Registration Statement and any post-effective amendment to the Registration Statement, and to the reference to us under the caption "Legal Matters" in the prospectus included in the Registration Statement. In giving such consent, we do not hereby admit that we are acting within the category of persons whose consent is required under Section 7 of the Act or the rules or regulations of the SEC thereunder.

Very truly yours,

/s/ Morgan, Lewis & Bockius LLP

Exhibit 10.5

CERECOR INC.

2015 OMNIBUS INCENTIVE COMPENSATION PLAN

Effective as of the Effective Date (as defined below), the Cerecor Inc. 2015 Omnibus Incentive Compensation Plan (the "Plan") is hereby established as a successor to the 2011 Stock Incentive Plan (the "2011 Plan"). The 2011 Plan is hereby merged with and into this Plan effective as of the Effective Date, and no additional grants shall be made thereafter under the 2011 Plan. Outstanding grants under the 2011 Plan shall continue in effect according to their terms as in effect before the Plan merger (subject to such amendments as the Committee (as defined below) determines, consistent with the 2011 Plan, as applicable), and the shares with respect to outstanding grants under the 2011 Plan shall be issued or transferred under this Plan.

The purpose of the Plan is (i) to provide employees of Cerecor Inc. (the "Company") and its subsidiaries, certain consultants and advisors who perform services for the Company or its subsidiaries and non-employee members of the Board of Directors of the Company with the opportunity to receive grants of incentive stock options, nonqualified stock options, stock appreciation rights, stock awards, stock units, and other stock-based awards, and (ii) to provide selected executive employees with the opportunity to receive bonus awards that are considered "qualified performance-based compensation" under section 162(m) of the Code (as defined below).

The Company believes that the Plan will encourage the participants to contribute materially to the growth of the Company, thereby benefitting the Company's stockholders, and will align the economic interests of the participants with those of the stockholders.

Section 1. Definitions

The following terms shall have the meanings set forth below for purposes of the Plan:

(a) "Board" shall mean the Board of Directors of the Company.

(b) "Bonus Award" shall mean a cash bonus awarded under the Plan as described under Section 11.

(c) "Cause" shall have the meaning given to that term in any written employment agreement, offer letter or severance agreement between the Employer and the Participant, or if no such agreement exists or if such term is not defined therein, and unless otherwise defined in the Grant Instrument, Cause shall mean a finding by the Committee that the Participant (i) has breached his or her employment or service contract with the Employer, (ii) has engaged in disloyalty to the Employer, including, without limitation, fraud, embezzlement, theft, commission of a felony or proven dishonesty, (iii) has disclosed trade secrets or confidential information of the Employer to persons not entitled to receive such information, (iv) has breached any written non-competition, non-solicitation, invention assignment or confidentiality agreement between the Participant and the Employer or (v) has engaged in such other behavior detrimental to the interests of the Employer as the Committee determines.

(d) Unless otherwise set forth in a Grant Instrument, a "Change of Control" shall be deemed to have occurred if:

(i) Any "person" (as such term is used in sections 13(d) and 14(d) of the Exchange Act) becomes a "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing more than 50% of the voting power of the then outstanding securities of the Company; provided that a Change of Control shall not be deemed to occur as a result of a transaction in which the Company becomes a subsidiary of another corporation and in which the stockholders of the Company, immediately prior to the transaction, will beneficially own, immediately after the transaction, shares entitling such stockholders to more than 50% of all votes to which all stockholders of the parent corporation would be entitled in the election of directors.

(ii) The consummation of (A) a merger or consolidation of the Company with another corporation where the stockholders of the Company, immediately prior to the merger or consolidation, will not beneficially own in substantially the same proportion as ownership immediately prior to the merger or consolidation, immediately after the merger or consolidation, shares entitling such stockholders to more than 50% of all votes to which all stockholders of the surviving corporation would be entitled in the election of directors, or where the members of the Board, immediately prior to the merger or consolidation, would not, immediately after the merger or consolidation, constitute a majority of the board of directors of the surviving corporation, (B) a sale or other disposition of all or substantially all of the assets of the Company, or (C) a liquidation or dissolution of the Company.

(iii) A change in the composition of the Board over a period of 12 consecutive months or less such that a majority of the Board members ceases, by reason of one or more contested elections for Board membership, to be comprised of individuals who either (A) have been Board members continuously since the beginning of such period or (B) have been elected or nominated for election as Board members during such period by at least a majority of the Board members described in clause (A) who were still in office at the time the Board approved such election or nomination.

The Committee may modify the definition of Change of Control for a particular Grant as the Committee deems appropriate to comply with section 409A of the Code or otherwise.

(e) "Code" shall mean the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

(f) "Committee" shall mean the Compensation Committee of the Board or another committee appointed by the Board to administer the Plan. With respect to Grants that are intended to be "qualified performance-based compensation" under section 162(m) of the Code, the Committee shall consist of two or more persons appointed by the Board, all of whom shall be "outside directors" as defined under section 162(m) of the Code. The Committee shall also consist of directors who are "non-employee directors" as defined under Rule 16b-3 promulgated under the Exchange Act and "independent directors," as determined in accordance

with the independence standards established by the stock exchange on which the Company Stock is at the time primarily traded.

(g) "Company" shall mean Cerecor Inc. and shall include its successors.

(h) "Company Stock" shall mean common stock of the Company.

(i) "Disability" or "Disabled" shall mean a Participant's becoming disabled within the meaning of section 22(e)(3) of the Code, within the meaning of the Employer's long-term disability plan applicable to the Participant or as otherwise determined by the Committee.

(j) "Dividend Equivalent" shall mean an amount determined by multiplying the number of shares of Company Stock subject to a Grant by the per-share cash dividend paid by the Company on its outstanding Company Stock, or the per-share fair market value (as determined by the Committee) of any dividend paid on its outstanding Company Stock in consideration other than cash. If interest is credited on accumulated divided equivalents, the term "Dividend Equivalent" shall include the accrued interest.

(k) "Effective Date" shall mean the business day immediately preceding the date at which the registration statement for the initial public offering of the Company Stock is declared effective by the Securities and Exchange Commission and the Company Stock is priced for the initial public offering of such Company Stock, subject to approval of the Plan by the stockholders of the Company.

(l) "Employee" shall mean an employee of the Employer (including an officer or director who is also an employee), but excluding any person who is classified by the Employer as a "contractor" or "consultant," no matter how characterized by the Internal Revenue Service, other governmental agency or a court. Any change of characterization of an individual by the Internal Revenue Service or any court or government agency shall have no effect upon the classification of an individual as an Employee for purposes of this Plan, unless the Committee determines otherwise.

(m) "Employed by, or providing service to, the Employer" shall mean employment or service as an Employee, Key Advisor or member of the Board (so that, for purposes of exercising Options and SARs and satisfying conditions with respect to Stock Awards, Stock Units, and Other Stock-Based Awards, a Participant shall not be considered to have terminated employment or service until the Participant ceases to be an Employee, Key Advisor and member of the Board), unless the Committee determines otherwise.

(n) "Employer" shall mean the Company and each of its subsidiaries.

(o) "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

(p) "Exercise Price" shall mean the per share price at which shares of Company Stock may be purchased under an Option, as designated by the Committee.

(q) "Fair Market Value" shall mean:

(i) If the Company Stock is publicly traded, then the Fair Market Value per share shall be determined as follows: (A) if the principal trading market for the Company Stock is a national securities exchange, the closing sales price during regular trading hours on the relevant date or (if there were no trades on that date) the latest preceding date upon which a sale was reported, or (B) if the Company Stock is not principally traded on any such exchange, the last reported sale price of a share of Company Stock during regular trading hours on the relevant date, as reported by the OTC Bulletin Board.

(ii) If the Company Stock is not publicly traded or, if publicly traded, is not subject to reported transactions as set forth above, the Fair Market Value per share shall be as determined by the Committee through any reasonable valuation method authorized under the Code.

(r) "Grant" shall mean an Option, SAR, Stock Award, Stock Unit, Other Stock-Based Award or Bonus Award granted under the Plan.

(s) "Grant Instrument" shall mean the written agreement that sets forth the terms and conditions of a Grant, including all amendments thereto.

(t) "Incentive Stock Option" shall mean an Option that is intended to meet the requirements of an incentive stock

option under section 422 of the Code.

(u) "Key Advisor" shall mean a consultant or advisor of the Employer.

(v) "Non-Employee Director" shall mean a member of the Board who is not an Employee.

(w) "Nonqualified Stock Option" shall mean an Option that is not intended to be taxed as an incentive stock option under section 422 of the Code.

(x) "Option" shall mean an option to purchase shares of Company Stock, as described in Section 6.

(y) "Other Stock-Based Award" shall mean any Grant based on, measured by or payable in Company Stock (other than an Option, Stock Unit, Stock Award, or SAR), as described in Section 10.

(z) "Plan" shall mean this Cerecor Inc. 2015 Omnibus Incentive Compensation Plan, as in effect from time to time.

(aa) "Participant" shall mean an Employee, Key Advisor or Non-Employee Director designated by the Committee to participate in the Plan.

(bb) "SAR" shall mean a stock appreciation right, as described in Section 9.

(cc) "Stock Award" shall mean an award of Company Stock, as described in Section 7.

(dd) "Stock Unit" shall mean an award of a phantom unit representing a share of Company Stock, as described in Section 8.

Section 2. Administration

(a) Committee. The Plan shall be administered and interpreted by the Committee; provided, however, that any Grants to members of the Board must be authorized by a majority of the Board. The Committee may delegate authority to one or more subcommittees, as it deems appropriate. To the extent that the Board or a subcommittee administers the Plan, references in the Plan to the "Committee" shall be deemed to refer to the Board or such subcommittee.

(b) Committee Authority. The Committee shall have the sole authority to (i) determine the individuals to whom Grants shall be made under the Plan, (ii) determine the type, size, terms and conditions of the Grants to be made to each such individual, (iii) determine the time when the Grants will be made and the duration of any applicable exercise or restriction period, including the criteria for exercisability and the acceleration of exercisability, (v) amend the terms of any previously issued Grant, subject to the provisions of Section 19 below, and (vi) deal with any other matters arising under the Plan.

(c) Committee Determinations. The Committee shall have full power and express discretionary authority to administer and interpret the Plan, to make factual determinations and to adopt or amend such rules, regulations, agreements and instruments for implementing the Plan and for the conduct of its business as it deems necessary or advisable, in its sole discretion. The Committee's interpretations of the Plan and all determinations made by the Committee pursuant to the powers vested in it hereunder shall be conclusive and binding on all persons having any interest in the Plan or in any awards granted hereunder. All powers of the Committee shall be executed in its sole discretion, in the best interest of the Company, not as a fiduciary, and in keeping with the objectives of the Plan and need not be uniform as to similarly situated individuals.

Section 3. Grants

Grants under the Plan may consist of Options as described in Section 6, Stock Awards as described in Section 7, Stock Units as described in Section 8, SARs as described in Section 9, Other Stock-Based Awards as described in Section 10 and Bonus Awards as described in Section 11. All Grants shall be subject to the terms and conditions set forth herein and to such other terms and conditions consistent with this Plan as the Committee deems appropriate and as are specified in writing by the Committee to the individual in the Grant Instrument. All Grants shall be made conditional upon the Participant's acknowledgement, in writing or by acceptance of the Grant, that all decisions and determinations of the Committee shall be final and binding on the Participant, his or her beneficiaries and any other person having or claiming an interest under

such Grant. Grants under a particular Section of the Plan need not be uniform as among the Participants.

Section 4. Shares Subject to the Plan

(a) Shares Authorized. Subject to adjustment as described below in Section 4(d), the aggregate number of shares of Company Stock that may be issued or transferred under the Plan shall be equal to the sum of the following: (i) 890,815, plus (ii) the

number of shares of Company Stock subject to outstanding grants under the 2011 Plan as of the Effective Date, plus (iii) the number of shares of Company Stock remaining available for issuance under the 2011 Plan but not subject to previously exercised, vested or paid grants as of the Effective Date; provided, however, that the aggregate number of shares of Company Stock that may be issued or transferred under the Plan pursuant to Incentive Stock Options shall not exceed 1,500,000 shares of Company Stock. In addition, as of the first trading day of January during the term of the Plan (excluding any extensions), beginning with calendar year 2016, an additional positive number of shares of Company Stock shall be added to the number of shares of Company Stock authorized to be issued or transferred under the Plan and the number of shares authorized to be issued or transferred pursuant to Incentive Stock Options, equal to 3% of the total number of shares of Company Stock outstanding on the last trading day in December of the immediately preceding calendar year.

(b) Source of Shares; Share Counting. Shares issued or transferred under the Plan may be authorized but unissued shares of Company Stock or reacquired shares of Company Stock, including shares purchased by the Company on the open market for purposes of the Plan. If and to the extent Options or SARs granted under the Plan (including options granted under the 2011 Plan) terminate, expire or are canceled, forfeited, exchanged or surrendered without having been exercised, or if any Stock Awards, Stock Units or Other Stock-Based Awards (including stock-based awards granted under the 2011 Plan) are forfeited, terminated or otherwise not paid in full, the shares subject to such Grants shall again be available for purposes of the Plan. If shares of Company Stock otherwise issuable under the Plan are surrendered in payment of the Exercise Price of an Option, then the number of shares of Company Stock available for issuance under the Plan shall be reduced only by the net number of shares actually issued by the Company upon such exercise and not by the gross number of shares as to which such Option is exercised. Upon the exercise of any SAR under the Plan, the number of shares of Company Stock available for issuance under the Plan shall be reduced by only by the net number of shares actually issued by the Company upon such exercise. If shares of Company Stock otherwise issuable under the Plan are withheld by the Company in satisfaction of the withholding taxes incurred in connection with the issuance, vesting or exercise of any Grant or the issuance of Company Stock thereunder, then the number of shares of Company Stock available for issuance under the Plan shall be reduced by the net number of shares issued, vested or exercised under such Grant, calculated in each instance after payment of such share withholding. To the extent any Grants are paid in cash, and not in shares of Company Stock, any shares previously subject to such Grants shall again be available for issuance or transfer under the Plan.

(c) Individual Limits. Subject to adjustment as described below in Section 4(d), the following Grant limitations shall apply:

(i) For Performance-Based Grants measured in shares of Company Stock (whether payable in Company Stock, cash or a combination of both), the maximum number of shares of Company Stock for which such Grants may be made to any Employee in any calendar year shall not exceed 500,000 shares of Company Stock in the aggregate.

(ii) For Performance-Based Grants measured in cash dollars (whether payable in cash, Company Stock or a combination of both) other than Bonus Awards, the maximum dollar amount for which such Grants may be made to any Employee in any calendar year shall not exceed $3,500,000 in the aggregate.

(iii) For dividends and Dividend Equivalents under the Plan, an Employee may not accrue an aggregate amount of dividends and Dividend Equivalents in excess of $35,000 each year with respect to Performance-Based Grants.

(iv) The maximum dollar amount that may be paid to an employee under Bonus Awards intended to be "qualified performance-based compensation" granted under the Plan with respect to each 12 month period within a performance period shall not exceed $500,000 in the aggregate. If a performance period includes more than one year, the amount payable with respect to each 12 month period shall be determined by dividing the total amount payable for the performance period by the number of years in the performance period.

(v) The maximum aggregate number of shares of Company Stock that may be subject to Grants granted to any Non-Employee Director during any calendar year shall not exceed 300,000 shares of Company Stock in the aggregate.

(d) Adjustments. If there is any change in the number or kind of shares of Company Stock outstanding by reason of (i) a stock dividend, spinoff, recapitalization, stock split, or combination or exchange of shares, (ii) a merger, reorganization or consolidation, (iii) a reclassification or change in par value, or (iv) any other extraordinary or unusual event affecting the outstanding Company Stock as a class without the Company's receipt of consideration, or if the value of outstanding shares of Company Stock is substantially reduced as a result of a spinoff or the Company's payment of an extraordinary dividend or distribution, the maximum number and kind of shares of Company Stock available for issuance under the Plan, the maximum number and kind of shares of Company Stock for which any individual may receive Grants in any year, the kind and number of shares covered by outstanding Grants, the kind and number of shares issued and to be issued under the Plan, and the price per share or the applicable market value of such Grants shall be equitably adjusted by the Committee to reflect any increase or decrease in the number of, or change in the kind or value of, the issued shares of Company Stock to preclude, to the extent practicable, the enlargement or dilution of rights and benefits under the Plan and such outstanding Grants; provided, however, that any fractional shares resulting from such adjustment shall be eliminated. In addition, in the event of a Change of Control, the provisions of Section 14 of the Plan shall apply. Any adjustments to outstanding Grants shall be consistent with section 409A or 424 of the Code, to the extent applicable. The adjustments of Grants under this Section 4(d) shall include adjustment of shares, Exercise Price of Stock Options, base amount of SARs, performance goals or other terms and conditions, as the Committee deems appropriate. The Committee shall have the sole discretion and authority to

determine what appropriate adjustments shall be made and any adjustments determined by the Committee shall be final, binding and conclusive.

Section 5. Eligibility for Participation

(a) Eligible Persons. All Employees (including, for all purposes of the Plan, an Employee who is a member of the Board) and Non-Employee Directors shall be eligible to participate in the Plan. Key Advisors shall be eligible to participate in the Plan if the Key Advisors render bona fide services to the Employer, the services are not in connection with the offer and sale of securities in a capital-raising transaction and the Key Advisors do not directly or indirectly promote or maintain a market for the Company's securities.

(b) Selection of Participants. The Committee shall select the Employees, Non-Employee Directors and Key Advisors to receive Grants and shall determine the number of shares of Company Stock subject to a particular Grant in such manner as the Committee determines.

Section 6. Options

The Committee may grant Options to an Employee, Non-Employee Director or Key Advisor upon such terms as the Committee deems appropriate. The following provisions are applicable to Options:

(a) Number of Shares. The Committee shall determine the number of shares of Company Stock that will be subject to each Grant of Options to Employees, Non-Employee Directors and Key Advisors.

(b) Type of Option and Exercise Price.

(i) The Committee may grant Incentive Stock Options or Nonqualified Stock Options or any combination of the two, all in accordance with the terms and conditions set forth herein. Incentive Stock Options may be granted only to employees of the Company or its parent or subsidiary corporations, as defined in section 424 of the Code. Nonqualified Stock Options may be granted to Employees, Non-Employee Directors and Key Advisors.

(ii) The Exercise Price of Company Stock subject to an Option shall be determined by the Committee and shall be equal to or greater than the Fair Market Value of a share of Company Stock on the date the Option is granted. However, an Incentive Stock Option may not be granted to an Employee who, at the time of grant, owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company, or any parent or subsidiary corporation of the Company, as defined in section 424 of the Code, unless the Exercise Price per share is not less than 110% of the Fair Market Value of a share of Company Stock on the date of grant.

(c) Option Term. The Committee shall determine the term of each Option. The term of any Option shall not exceed ten years from the date of grant. However, an Incentive

Stock Option that is granted to an Employee who, at the time of grant, owns stock possessing more than 10% of the total combined voting power of all classes of stock of the Company, or any parent or subsidiary corporation of the Company, as defined in section 424 of the Code, may not have a term that exceeds five years from the date of grant.

(d) Exercisability of Options. Options shall become exercisable in accordance with such terms and conditions, consistent with the Plan, as may be determined by the Committee and specified in the Grant Instrument. The Committee may accelerate the exercisability of any or all outstanding Options at any time for any reason.

(e) Grants to Non-Exempt Employees. Notwithstanding the foregoing, Options granted to persons who are non-exempt employees under the Fair Labor Standards Act of 1938, as amended, may not be exercisable for at least six months after the date of grant (except that such Options may become exercisable, as determined by the Committee, upon the Participant's death, Disability or retirement, or upon a Change of Control or other circumstances permitted by applicable regulations).

(f) Termination of Employment or Service. Except as provided in the Grant Instrument, an Option may only be exercised while the Participant is employed by, or providing services to, the Employer. The Committee shall determine in the Grant Instrument under what circumstances and during what time periods a Participant may exercise an Option after termination of employment or service.

(g) Exercise of Options. A Participant may exercise an Option that has become exercisable, in whole or in part, by delivering a notice of exercise to the Company. The Participant shall pay the Exercise Price for an Option as specified by the Committee (i) in cash, (ii) unless the Committee determines otherwise, by delivering shares of Company Stock owned by the Participant and having a Fair Market Value on the date of exercise at least equal to the Exercise Price or by attestation (on a form prescribed by the Committee) to ownership of shares of Company Stock having a Fair Market Value on the date of exercise at least equal to the Exercise Price, (iii) by payment through a broker in accordance with procedures permitted by Regulation T of the Federal Reserve Board, or (iv) by such other method as the Committee may approve. In addition, to the extent an Option is at the time exercisable for vested shares of Company Stock, all or any part of that vested portion may be surrendered to the Company for an appreciation distribution payable in shares of Company Stock with a Fair Market Value at the time of the Option surrender equal to the dollar amount by which the then Fair

Market Value of the shares of Company Stock subject to the surrendered portion exceeds the aggregate Exercise Price payable for those shares ("net exercise"). Shares of Company Stock used to exercise an Option shall have been held by the Participant for the requisite period of time necessary to avoid adverse accounting consequences to the Company with respect to the Option. Payment for the shares to be issued or transferred pursuant to the Option, and any required withholding taxes, must be received by the Company by the time specified by the Committee depending on the type of payment being made, but in all cases prior to the issuance or transfer of such shares.

(h) Limits on Incentive Stock Options. Each Incentive Stock Option shall provide that, if the aggregate Fair Market Value of the Company Stock on the date of the grant

with respect to which Incentive Stock Options are exercisable for the first time by a Participant during any calendar year, under the Plan or any other stock option plan of the Company or a parent or subsidiary, exceeds $100,000, then the Option, as to the excess, shall be treated as a Nonqualified Stock Option.

Section 7. Stock Awards

The Committee may issue or transfer shares of Company Stock to an Employee, Non-Employee Director or Key Advisor under a Stock Award, upon such terms as the Committee deems appropriate. The following provisions are applicable to Stock Awards:

(a) General Requirements. Shares of Company Stock issued or transferred pursuant to Stock Awards may be issued or transferred for consideration or for no consideration, and subject to restrictions or no restrictions, as determined by the Committee. The Committee may, but shall not be required to, establish conditions under which restrictions on Stock Awards shall lapse over a period of time or according to such other criteria as the Committee deems appropriate, including, without limitation, restrictions based upon the achievement of specific performance goals. The period of time during which the Stock Awards will remain subject to restrictions will be designated in the Grant Instrument as the "Restriction Period."

(b) Number of Shares. The Committee shall determine the number of shares of Company Stock to be issued or transferred pursuant to a Stock Award and the restrictions applicable to such shares.

(c) Requirement of Employment or Service. If the Participant ceases to be employed by, or provide service to, the Employer during a period designated in the Grant Instrument as the Restriction Period, or if other specified conditions are not met, the Stock Award shall terminate as to all shares covered by the Grant as to which the restrictions have not lapsed, and those shares of Company Stock must be immediately returned to the Company. The Committee may, however, provide for complete or partial exceptions to this requirement as it deems appropriate.

(d) Restrictions on Transfer and Legend on Stock Certificate. During the Restriction Period, a Participant may not sell, assign, transfer, pledge or otherwise dispose of the shares of a Stock Award except under Section 17(a) below. Unless otherwise determined by the Committee, the Company will retain possession of certificates for shares of Stock Awards until all restrictions on such shares have lapsed. Each certificate for a Stock Award, unless held by the Company, shall contain a legend giving appropriate notice of the restrictions in the Grant. The Participant shall be entitled to have the legend removed from the stock certificate covering the shares subject to restrictions when all restrictions on such shares have lapsed. The Committee may determine that the Company will not issue certificates for Stock Awards until all restrictions on such shares have lapsed.

(e) Right to Vote and to Receive Dividends. Unless the Committee determines otherwise, during the Restriction Period, the Participant shall have the right to vote shares of Stock Awards and to receive any dividends or other distributions paid on such shares, subject to any restrictions deemed appropriate by the Committee, including, without limitation,

the achievement of specific performance goals. Dividends with respect to Stock Awards that vest based on performance shall vest if and to the extent that the underlying Stock Award vests, as determined by the Committee.

(f) Lapse of Restrictions. All restrictions imposed on Stock Awards shall lapse upon the expiration of the applicable Restriction Period and the satisfaction of all conditions, if any, imposed by the Committee. The Committee may determine, as to any or all Stock Awards, that the restrictions shall lapse without regard to any Restriction Period.

Section 8. Stock Units

The Committee may grant Stock Units, each of which shall represent one hypothetical share of Company Stock, to an Employee, Non-Employee Director or Key Advisor upon such terms and conditions as the Committee deems appropriate. The following provisions are applicable to Stock Units:

(a) Crediting of Units. Each Stock Unit shall represent the right of the Participant to receive a share of Company Stock or an amount of cash based on the value of a share of Company Stock, if and when specified conditions are met. All Stock Units shall be credited to bookkeeping accounts established on the Company's records for purposes of the Plan.

(b) Terms of Stock Units. The Committee may grant Stock Units that are payable if specified performance goals or other conditions are met, or under other circumstances. Stock Units may be paid at the end of a specified performance period or other

period, or payment may be deferred to a date authorized by the Committee. The Committee shall determine the number of Stock Units to be granted and the requirements applicable to such Stock Units.

(c) Requirement of Employment or Service. If the Participant ceases to be employed by, or provide service to, the Employer prior to the vesting of Stock Units, or if other conditions established by the Committee are not met, the Participant's Stock Units shall be forfeited. The Committee may, however, provide for complete or partial exceptions to this requirement as it deems appropriate.

(d) Payment With Respect to Stock Units. Payments with respect to Stock Units shall be made in cash, Company Stock or any combination of the foregoing, as the Committee shall determine.

Section 9. Stock Appreciation Rights

The Committee may grant SARs to an Employee, Non-Employee Director or Key Advisor separately or in tandem with any Option. The following provisions are applicable to SARs:

(a) General Requirements. The Committee may grant SARs to an Employee, Non-Employee Director or Key Advisor separately or in tandem with any Option (for all or a portion of the applicable Option). Tandem SARs may be granted either at the time the Option is granted or at any time thereafter while the Option remains outstanding; provided, however, that,

in the case of an Incentive Stock Option, SARs may be granted only at the time of the grant of the Incentive Stock Option. The Committee shall establish the base amount of the SAR at the time the SAR is granted. The base amount of each SAR shall be equal to or greater than the Fair Market Value of a share of Company Stock as of the date of grant of the SAR. The term of each SAR shall not exceed ten years from grant.

(b) Tandem SARs. In the case of tandem SARs, the number of SARs granted to a Participant that shall be exercisable during a specified period shall not exceed the number of shares of Company Stock that the Participant may purchase upon the exercise of the related Option during such period. Upon the exercise of an Option, the SARs relating to the Company Stock covered by such Option shall terminate. Upon the exercise of SARs, the related Option shall terminate to the extent of an equal number of shares of Company Stock.

(c) Exercisability. An SAR shall be exercisable during the period specified by the Committee in the Grant Instrument and shall be subject to such vesting and other restrictions as may be specified in the Grant Instrument. The Committee may accelerate the exercisability of any or all outstanding SARs at any time for any reason. SARs may only be exercised while the Participant is employed by, or providing service to, the Employer or during the applicable period after termination of employment or service as specified by the Committee. A tandem SAR shall be exercisable only during the period when the Option to which it is related is also exercisable.

(d) Grants to Non-Exempt Employees. Notwithstanding the foregoing, SARs granted to persons who are non-exempt employees under the Fair Labor Standards Act of 1938, as amended, may not be exercisable for at least six months after the date of grant (except that such SARs may become exercisable, as determined by the Committee, upon the Participant's death, Disability or retirement, or upon a Change of Control or other circumstances permitted by applicable regulations).

(e) Value of SARs. When a Participant exercises SARs, the Participant shall receive in settlement of such SARs an amount equal to the value of the stock appreciation for the number of SARs exercised. The stock appreciation for an SAR is the amount by which the Fair Market Value of the underlying Company Stock on the date of exercise of the SAR exceeds the base amount of the SAR as described in subsection (a).

(f) Form of Payment. The appreciation in an SAR shall be paid in shares of Company Stock, cash or any combination of the foregoing, as the Committee shall determine. For purposes of calculating the number of shares of Company Stock to be received, shares of Company Stock shall be valued at their Fair Market Value on the date of exercise of the SAR.

Section 10. Other Stock-Based Awards

The Committee may grant Other Stock-Based Awards, which are awards (other than those described in Sections 6, 7, 8 and 9 of the Plan) that are based on or measured by Company Stock, to any Employee, Non-Employee Director or Key Advisor, on such terms and conditions as the Committee shall determine. Other Stock-Based Awards may be awarded subject to the

achievement of performance goals or other conditions and may be payable in cash, Company Stock or any combination of the foregoing, as the Committee shall determine.

Section 11. Bonus Awards

The Committee may grant Bonus Awards to Employees who are executive officers and other key employees of the Company.

The Committee shall, in its sole discretion, determine which such Employees will receive Bonus Awards and the terms and conditions applicable to Bonus Awards, including the criteria for the vesting of Bonus Awards, which shall be based on such measures as the Committee deems appropriate and need not relate to the value of shares of Company Stock.

Section 12. Dividend Equivalents

The Committee may grant Dividend Equivalents in connection with Stock Units or Other Stock-Based Awards. Dividend Equivalents may be paid currently or accrued as contingent cash obligations and may be payable in cash or shares of Company Stock, and upon such terms as the Committee may establish, including, without limitation, the achievement of specific performance goals. Dividend Equivalents with respect to Stock Units or Other Stock-Based Awards that vest based on performance shall vest and be paid only if and to the extent the underlying Stock Units vest and are paid, as determined by the Committee.

Section 13. Qualified Performance-Based Compensation

The Committee may determine that Stock Awards, Stock Units, Other Stock-Based Awards, Bonus Awards and Dividend Equivalents granted to an Employee shall be considered "qualified performance-based compensation" under section 162(m) of the Code. The following provisions shall apply to Grants of Stock Awards, Stock Units, Other Stock-Based Awards, Bonus Awards and Dividend Equivalents that are to be considered "qualified performance-based compensation" under section 162(m) of the Code ("Performance-Based Grants"):

(a) Performance Goals.

(i) When Performance-Based Grants are granted, the Committee shall establish in writing (A) the objective performance goals that must be met, (B) the performance period during which the performance will be measured, (C) the maximum amounts that may be paid if the performance goals are met, and (D) any other conditions that the Committee deems appropriate and consistent with the Plan and section 162(m) of the Code.

(ii) Performance goal criteria may be established on an absolute or relative basis and may be established on a corporate-wide basis or with respect to one or more business units, divisions, subsidiaries or business segments. Relative performance may be measured against a group of peer companies, a financial market index or other objective and quantifiable indices. The Committee shall use objectively determinable performance goals based on one or more of the following criteria: cash flow; earnings (including gross margin, earnings before interest and taxes, earnings before taxes, earnings before interest, taxes, depreciation, amortization and charges for stock-based compensation, earnings before interest, taxes,

depreciation and amortization, and net earnings); earnings per share; growth in earnings or earnings per share; stock price; return on equity or average stockholder equity; total stockholder return or growth in total stockholder return either directly or in relation to a comparative group; return on capital; return on assets or net assets; revenue, growth in revenue or return on sales; income or net income; operating income, net operating income or net operating income after tax; operating profit or net operating profit; operating margin; return on operating revenue or return on operating profit; regulatory filings; regulatory approvals, litigation and regulatory resolution goals; other operational, regulatory or departmental objectives; budget comparisons; growth in stockholder value relative to established indexes, or another peer group or peer group index; development and implementation of strategic plans and/or organizational restructuring goals; development and implementation of risk and crisis management programs; improvement in workforce diversity; compliance requirements and compliance relief; safety goals; productivity goals; workforce management and succession planning goals; economic value added (including typical adjustments consistently applied from generally accepted accounting principles required to determine economic value added performance measures); measures of customer satisfaction, employee satisfaction or staff development; development or marketing collaborations, formations of joint ventures or partnerships or the completion of other similar transactions intended to enhance the Corporation's revenue or profitability or enhance its customer base; merger and acquisitions; and other similar criteria consistent with the foregoing.

(b) Establishment of Goals. The Committee shall establish the performance goals in writing either before the beginning of the performance period or during a period ending no later than the earlier of (i) 90 days after the beginning of the performance period or (ii) the date on which 25% of the performance period has been completed, or such other date as may be required or permitted under applicable regulations under section 162(m) of the Code. The performance goals shall satisfy the requirements for "qualified performance-based compensation," including the requirement that the achievement of the goals be substantially uncertain at the time they are established and that the goals be established in such a way that a third party with knowledge of the relevant facts could determine whether and to what extent the performance goals have been met. The Committee shall not have discretion to increase the amount of compensation that is payable upon achievement of the designated performance goals.

(c) Certification of Results. The Committee shall certify and announce the results for each performance period to all Participants after the announcement of the Company's financial results for the performance period. If and to the extent that the Committee does not certify that the performance goals have been met, the Performance-Based Grants awarded for the performance period shall be forfeited or shall not be made or paid, as applicable.

(d) Death, Disability or Other Circumstances. The Committee may provide that Performance-Based Grants shall be payable or restrictions on such Grants shall lapse, in whole or in part, in the event of the Participant's death or Disability during the performance period, or under other circumstances consistent with the Treasury regulations and rulings under section 162(m) of the Code.

Section 14. Consequences of a Change of Control

(a) Assumption of Outstanding Grants. Upon a Change of Control where the Company is not the surviving corporation (or survives only as a subsidiary of another corporation), unless the Committee determines otherwise, all outstanding Grants that are not exercised or paid at the time of the Change of Control shall be assumed by, or replaced with grants that have comparable terms by, the surviving corporation (or a parent or subsidiary of the surviving corporation). After a Change of Control, references to the "Company" as they relate to employment matters shall include the successor employer.

(b) Vesting Upon Certain Terminations of Employment. Unless the Grant Instrument provides otherwise, if a Participant's employment is terminated by the Company without Cause upon or within 12 months following a Change of Control, the Participant's outstanding Grants shall become fully vested as of the date of such termination; provided that if the vesting of any such Grants is based, in whole or in part, on performance, the applicable Grant Instrument shall specify how the portion of the Grant that becomes vested pursuant to this Section 14(b) shall be calculated.

(c) Other Alternatives. In the event of a Change of Control, if all outstanding Grants are not assumed by, or replaced with grants that have comparable terms by, the surviving corporation (or a parent or subsidiary of the surviving corporation), the Committee may take any of the following actions with respect to any or all outstanding Grants, without the consent of any Participant: (i) the Committee may determine that outstanding Stock Options and SARs shall automatically accelerate and become fully exercisable and the restrictions and conditions on outstanding Stock Awards, Stock Units, Bonus Awards and Dividend Equivalents shall immediately lapse; (ii) the Committee may determine that Participants shall receive a payment in settlement of outstanding Stock Units, Bonus Awards or Dividend Equivalents, in such amount and form as may be determined by the Committee; (ii) the Committee may require that Participants surrender their outstanding Stock Options and SARs in exchange for a payment by the Company, in cash or Company Stock as determined by the Committee, in an amount equal to the amount, if any, by which the then Fair Market Value of the shares of Company Stock subject to the Participant's unexercised Stock Options and SARs exceeds the Stock Option Exercise Price or SAR base amount, and (iv) after giving Participants an opportunity to exercise all of their outstanding Stock Options and SARs, the Committee may terminate any or all unexercised Stock Options and SARs at such time as the Committee deems appropriate. Such surrender, termination or payment shall take place as of the date of the Change of Control or such other date as the Committee may specify. Without limiting the foregoing, if the per share Fair Market Value of the Company Stock does not exceed the per share Stock Option Exercise Price or SAR base amount, as applicable, the Company shall not be required to make any payment to the participant upon surrender of the Stock Option or SAR.

Section 15. Deferrals

The Committee may permit or require a Participant to defer receipt of the payment of cash or the delivery of shares that would otherwise be due to such Participant in connection with any Grant. If any such deferral election is permitted or required, the Committee shall establish

rules and procedures for such deferrals and may provide for interest or other earnings to be paid on such deferrals. The rules and procedures for any such deferrals shall be consistent with applicable requirements of section 409A of the Code.

Section 16. Withholding of Taxes

(a) Required Withholding. All Grants under the Plan shall be subject to applicable United States federal (including FICA), state and local, foreign country or other tax withholding requirements. The Employer may require that the Participant or other person receiving Grants or exercising Grants pay to the Employer an amount sufficient to satisfy such tax withholding requirements with respect to such Grants, or the Employer may deduct from other wages and compensation paid by the Employer the amount of any withholding taxes due with respect to such Grants.

(b) Share Withholding. The Committee may permit or require the Employer's tax withholding obligation with respect to Grants paid in Company Stock to be paid by having shares withheld up to an amount that does not exceed the Participant's minimum applicable withholding tax rate for United States federal (including FICA), state and local tax liabilities, or as otherwise determined by the Committee. The Committee may, in its discretion, and subject to such rules as the Committee may adopt, allow Participants to elect to have such share withholding applied to all or a portion of the tax withholding obligation arising in connection with any particular Grant.

Section 17. Transferability of Grants

(a) Nontransferability of Grants. Except as described in subsection (b) below, only the Participant may exercise rights under a Grant during the Participant's lifetime. A Participant may not transfer those rights except (i) by will or by the laws of descent and distribution or (ii) with respect to Grants other than Incentive Stock Options, pursuant to a domestic relations order. When a Participant dies, the personal representative or other person entitled to succeed to the rights of the Participant may exercise such rights. Any such successor must furnish proof satisfactory to the Company of his or her right to receive the Grant under the Participant's will or under the applicable laws of descent and distribution.

(b) Transfer of Nonqualified Stock Options. Notwithstanding the foregoing, the Committee may provide, in a

Grant Instrument, that a Participant may transfer Nonqualified Stock Options to family members, or one or more trusts or other entities for the benefit of or owned by family members, consistent with the applicable securities laws, according to such terms as the Committee may determine; provided that the Participant receives no consideration for the transfer of an Option and the transferred Option shall continue to be subject to the same terms and conditions as were applicable to the Option immediately before the transfer.

Section 18. Requirements for Issuance or Transfer of Shares

No Company Stock shall be issued or transferred in connection with any Grant hereunder unless and until all legal requirements applicable to the issuance or transfer of such Company Stock have been complied with to the satisfaction of the Committee. The Committee shall have

the right to condition any Grant on the Participant's undertaking in writing to comply with such restrictions on his or her subsequent disposition of the shares of Company Stock as the Committee shall deem necessary or advisable, and certificates representing such shares may be legended to reflect any such restrictions. Certificates representing shares of Company Stock issued or transferred under the Plan may be subject to such stop-transfer orders and other restrictions as the Committee deems appropriate to comply with applicable laws, regulations and interpretations, including any requirement that a legend be placed thereon.

Section 19. Amendment and Termination of the Plan

(a) Amendment. The Board may amend or terminate the Plan at any time; provided, however, that the Board shall not amend the Plan without stockholder approval if such approval is required in order to comply with the Code or other applicable law, or to comply with applicable stock exchange requirements.

(b) No Repricing of Options or SARs. Except in connection with a corporate transaction involving the Company (including, without limitation, any stock dividend, distribution (whether in the form of cash, Company Stock, other securities or property), stock split, extraordinary cash dividend, recapitalization, change in control, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of shares of Company Stock or other securities, or similar transactions), the Company may not, without obtaining stockholder approval, (i) amend the terms of outstanding Stock Options or SARs to reduce the Exercise Price of such outstanding Stock Options or base price of such SARs, (ii) cancel outstanding Stock Options or SARs in exchange for Stock Options or SARs with an Exercise Price or base price, as applicable, that is less than the Exercise Price or base price of the original Stock Options or SARs or (iii) cancel outstanding Stock Options or SARs with an Exercise Price or base price, as applicable, above the current stock price in exchange for cash or other securities.

(c) Stockholder Approval Requirements.

(i) The Plan is intended to comply with the transition relief set forth at Treas. Reg. §1.162-27(f)(1) for companies that become publicly held in connection with an initial public offering, which applies until the first to occur of (A) the expiration of the Plan, (B) a material modification of the Plan within the meaning of section 162(m) and the regulations thereunder, (C) the issuance of all Company Stock authorized under the Plan, or (D) the first meeting of stockholders at which directors are to be elected that occurs after the close of the third calendar year following the calendar year in which the initial public offering occurs (the period commencing on the initial public offering and ending on the first to occur of the foregoing events shall be hereinafter referred to as the "Reliance Period").

(ii) Following the Reliance Period, if Grants are made as "qualified performance-based compensation" under Section 13 above, the Plan must be approved by the stockholders. Following such stockholder approval, the Plan must be reapproved by the stockholders no later than the first stockholders meeting that occurs in the fifth year following the year in which the stockholders previously approved the Plan, if additional Grants are to be

made under Section 13 and if required by section 162(m) of the Code or the regulations thereunder.

(d) Termination of Plan. The Plan shall terminate on the day immediately preceding the tenth anniversary of its Effective Date, unless the Plan is terminated earlier by the Board or is extended by the Board with the approval of the stockholders.

(e) Termination and Amendment of Outstanding Grants. A termination or amendment of the Plan that occurs after a Grant is made shall not materially impair the rights of a Participant unless the Participant consents or unless the Committee acts under Section 20(f) below. The termination of the Plan shall not impair the power and authority of the Committee with respect to an outstanding Grant. Whether or not the Plan has terminated, an outstanding Grant may be terminated or amended under Section 20(f) below or may be amended by agreement of the Company and the Participant consistent with the Plan.

Section 20. Miscellaneous

(a) Grants in Connection with Corporate Transactions and Otherwise. Nothing contained in the Plan shall be construed to (i) limit the right of the Committee to make Grants under the Plan in connection with the acquisition, by purchase, lease, merger, consolidation or otherwise, of the business or assets of any corporation, firm or association, including Grants to employees

thereof who become Employees, or (ii) limit the right of the Company to grant stock options or make other awards outside of the Plan. The Committee may make a Grant to an employee of another corporation who becomes an Employee by reason of a corporate merger, consolidation, acquisition of stock or property, reorganization or liquidation involving the Company, in substitution for a stock option or stock awards grant made by such corporation. Notwithstanding anything in the Plan to the contrary, the Committee may establish such terms and conditions of the new Grants as it deems appropriate, including setting the Exercise Price of Options or the base price of SARs at a price necessary to retain for the Participant the same economic value as the prior options or rights.

(b) Governing Document. The Plan shall be the controlling document. No other statements, representations, explanatory materials or examples, oral or written, may amend the Plan in any manner. The Plan shall be binding upon and enforceable against the Company and its successors and assigns.

(c) Funding of the Plan. The Plan shall be unfunded. The Company shall not be required to establish any special or separate fund or to make any other segregation of assets to assure the payment of any Grants under the Plan.

(d) Rights of Participants. Nothing in the Plan shall entitle any Employee, Non-Employee Director, Key Advisor or other person to any claim or right to receive a Grant under the Plan. Neither the Plan nor any action taken hereunder shall be construed as giving any individual any rights to be retained by or in the employ of the Employer or any other employment rights.

(e) No Fractional Shares. No fractional shares of Company Stock shall be issued or delivered pursuant to the Plan or any Grant. Except as otherwise provided under the Plan, the Committee shall determine whether cash, other awards or other property shall be issued or paid in lieu of such fractional shares or whether such fractional shares or any rights thereto shall be forfeited or otherwise eliminated.

(f) Compliance with Law.

(i) The Plan, the exercise of Options and SARs and the obligations of the Company to issue or transfer shares of Company Stock under Grants shall be subject to all applicable laws and regulations, and to approvals by any governmental or regulatory agency as may be required. With respect to persons subject to section 16 of the Exchange Act, it is the intent of the Company that the Plan and all transactions under the Plan comply with all applicable provisions of Rule 16b-3 or its successors under the Exchange Act. In addition, it is the intent of the Company that Incentive Stock Options comply with the applicable provisions of section 422 of the Code, that Grants of "qualified performance-based compensation" comply with the applicable provisions of section 162(m) of the Code and that, to the extent applicable, Grants comply with the requirements of section 409A of the Code. To the extent that any legal requirement of section 16 of the Exchange Act or section 422, 162(m) or 409A of the Code as set forth in the Plan ceases to be required under section 16 of the Exchange Act or section 422, 162(m) or 409A of the Code, that Plan provision shall cease to apply. The Committee may revoke any Grant if it is contrary to law or modify a Grant to bring it into compliance with any valid and mandatory government regulation. The Committee may also adopt rules regarding the withholding of taxes on payments to Participants. The Committee may, in its sole discretion, agree to limit its authority under this Section.

(ii) The Plan is intended to comply with the requirements of section 409A of the Code, to the extent applicable. Each Grant shall be construed and administered such that the Grant either (A) qualifies for an exemption from the requirements of section 409A of the Code or (B) satisfies the requirements of section 409A of the Code. If a Grant is subject to section 409A of the Code, (I) distributions shall only be made in a manner and upon an event permitted under section 409A of the Code, (II) payments to be made upon a termination of employment or service shall only be made upon a "separation from service" under section 409A of the Code, (III) unless the Grant specifies otherwise, each installment payment shall be treated as a separate payment for purposes of section 409A of the Code, and (IV) in no event shall a Participant, directly or indirectly, designate the calendar year in which a distribution is made except in accordance with section 409A of the Code.

(iii) Any Grant that is subject to section 409A of the Code and that is to be distributed to a Key Employee (as defined below) upon separation from service shall be administered so that any distribution with respect to such Grant shall be postponed for six months following the date of the Participant's separation from service, if required by section 409A of the Code. If a distribution is delayed pursuant to section 409A of the Code, the distribution shall be paid within 15 days after the end of the six-month period. If the Participant dies during such six-month period, any postponed amounts shall be paid within 90 days of the Participant's death. The determination of Key Employees, including the number and identity of

persons considered Key Employees and the identification date, shall be made by the Committee or its delegate each year in accordance with section 416(i) of the Code and the "specified employee" requirements of section 409A of the Code.

(iv) Notwithstanding anything in the Plan or any Grant agreement to the contrary, each Participant shall be solely responsible for the tax consequences of Grants under the Plan, and in no event shall the Company or any subsidiary or affiliate of the Company have any responsibility or liability if a Grant does not meet any applicable requirements of section 409A of the Code. Although the Company intends to administer the Plan to prevent taxation under section 409A of the Code, the Company does not represent or warrant that the Plan or any Grant complies with any provision of federal, state, local or other tax law.

(g) Establishment of Subplans. The Board may from time to time establish one or more sub-plans under the Plan

for purposes of satisfying applicable blue sky, securities or tax laws of various jurisdictions. The Board shall establish such sub-plans by adopting supplements to the Plan setting forth (i) such limitations on the Committee's discretion under the Plan as the Board deems necessary or desirable and (ii) such additional terms and conditions not otherwise inconsistent with the Plan as the Board shall deem necessary or desirable. All supplements adopted by the Board shall be deemed to be part of the Plan, but each supplement shall apply only to Participants within the affected jurisdiction and the Employer shall not be required to provide copies of any supplement to Participants in any jurisdiction that is not affected.

(h) Clawback Rights. Subject to the requirements of applicable law, the Committee may provide in any Grant Instrument that, if a Participant breaches any restrictive covenant agreement between the Participant and the Employer (which may be set forth in any Grant Instrument) or otherwise engages in activities that constitute Cause either while employed by, or providing service to, the Employer or within a specified period of time thereafter, all Grants held by the Participant shall terminate, and the Company may rescind any exercise of an Option or SAR and the vesting of any other Grant and delivery of shares upon such exercise or vesting (including pursuant to dividends and Dividend Equivalents), as applicable on such terms as the Committee shall determine, including the right to require that in the event of any such rescission, (i) the Participant shall return to the Company the shares received upon the exercise of any Option or SAR and/or the vesting and payment of any other Grant (including pursuant to dividends and Dividend Equivalents) or, (ii) if the Participant no longer owns the shares, the Participant shall pay to the Company the amount of any gain realized or payment received as a result of any sale or other disposition of the shares (or, in the event the Participant transfers the shares by gift or otherwise without consideration, the Fair Market Value of the shares on the date of the breach of the restrictive covenant agreement (including a Participant's Grant Instrument containing restrictive covenants) or activity constituting Cause), net of the price originally paid by the Participant for the shares. Payment by the Participant shall be made in such manner and on such terms and conditions as may be required by the Committee. The Employer shall be entitled to set off against the amount of any such payment any amounts otherwise owed to the Participant by the Employer. In addition, all Grants under the Plan shall be subject to any applicable clawback or recoupment policies, share trading policies and other policies that may be implemented by the Board from time to time.

(i) Governing Law. The validity, construction, interpretation and effect of the Plan and Grant Instruments issued under the Plan shall be governed and construed by and determined in accordance with the laws of the State of Delaware, without giving effect to the conflict of laws provisions thereof.

Employee Form

CERECOR, INC.
2015 OMNIBUS INCENTIVE COMPENSATION PLAN

NONQUALIFIED STOCK OPTION SUMMARY OF GRANT

Cerecor, Inc., a Delaware corporation (the "Company"), pursuant to its 2015 Omnibus Incentive Compensation Plan (the "Plan"), hereby grants to the individual listed below (the "Participant"), a nonqualified stock option to purchase shares of common stock of the Company ("Company Stock") that may become vested and exercisable as set forth below (the "Option"). The Option is subject in all respects to the terms and conditions set forth herein, in the Nonqualified Stock Option Grant Agreement attached hereto as Exhibit A (the "Nonqualified Stock Option Grant Agreement") and the Plan, each of which is incorporated herein by reference and made part hereof. Unless otherwise defined herein, capitalized terms used in this Nonqualified Stock Option Summary of Grant (the "Summary of Grant") and the Nonqualified Stock Option Grant Agreement will have the meanings set forth in the Plan.

Participant:	[**NAME**]
Date of Grant:	[**DATE**]
Total Number of Shares Granted:	[**NUMBER**] of shares of Company Stock
Exercise Price:	[**FMV on Date of Grant**]
Exercisability of the Option:	Except as set forth herein, the Option will vest and become exercisable on the following dates (each, a "Vesting Date"), provided that the Participant continues to be employed by, or provide service to, the Employer from the Date of Grant through the applicable Vesting Date: · **[On the first anniversary of the Date of Grant with respect to 25% of the shares of Company Stock subject to the Option; and** · **On the [Insert monthly anniversary of the Date of Grant] of each month thereafter with respect to 2.083% of the shares of Company Stock subject to the Option.]** The Option will be fully vested and exercisable on **[the fourth anniversary of the Date of Grant]** if the Participant is employed by, or providing services to, the Employer on such date.
[Vesting Upon Certain	**[In the event the Participant ceases to be employed by, or provide service to, the Employer,**

Termination Events:]	**on account of (i) involuntary termination by the Employer without Cause (as defined in the written employment agreement between the Company and the Participant, dated April 28, 2011 and amended September 1, 2011 (the "Employment Agreement")) other than for death or**
	Disability (as defined in the Employment Agreement) or (ii) a resignation by the Participant for Good Reason (as defined in the Employment Agreement), the Option will automatically accelerate and become fully vested and exercisable upon such cessation of employment or service.] ***[NOTE: The bracketed language applies to Dr. Paterson only.]***

Participant Acceptance:

By signing the acknowledgement below, the Participant agrees to be bound by the terms and conditions of the Plan, the Nonqualified Stock Option Grant Agreement and this Summary of Grant and accepts the Option. The Participant accepts as binding, conclusive and final all decisions or interpretations of the Committee upon any questions arising under the Plan, this Summary of Grant or the Nonqualified Stock Option Grant Agreement.

The Participant acknowledges delivery of the Plan and the Plan prospectus together this with this Summary of Grant and the Nonqualified Stock Option Grant Agreement. Additional copies of the Plan and the Plan prospectus are available by contacting the Company's Human Resources Department at 410-522-8707.

Agreed and accepted:

_____

Participant

_____

Date

EXHIBIT A

CERECOR, INC.

NONQUALIFIED STOCK OPTION GRANT AGREEMENT
(Pursuant to the 2015 Omnibus Incentive Compensation Plan)

This Nonqualified Stock Option Grant Agreement (this "Agreement") is delivered by Cerecor, Inc., a Delaware corporation (the "Company"), pursuant to the Summary of Grant delivered with this Agreement to the individual named in the Summary of Grant (the "Participant"). The Summary of Grant, which specifies the Participant, the date as of which the grant is made (the "Date of Grant"), the vesting schedule and other specific details of the grant is incorporated herein by reference.

1. **Option Grant**. Upon the terms and conditions set forth in this Agreement and in the Company's 2015 Omnibus Incentive Compensation Plan (the "Plan"), the Company hereby grants to the Participant a nonqualified stock option to purchase the number of shares of common stock of the Company ("Company Stock") set forth in the Summary of Grant (the "Option"). The Participant hereby acknowledges the receipt of a copy of the official prospectus for the Plan. Copies of the Plan and the official Plan prospectus are available by contacting the Company's Human Resources Department at 410-522-8707. This Agreement is made pursuant to the Plan and is subject in its entirety to all applicable provisions of the Plan. Capitalized terms used herein and not otherwise defined will have the meanings set forth in the Plan. The Participant agrees to be bound by all of the terms and conditions of the Plan.

2. **Exercisability of the Option**.

(a) The Option will become vested and exercisable as set forth in the Summary of Grant, provided that the Participant continues to be employed by, or provide service to, the Employer through the Vesting Date (as defined in the Summary of Grant).

(b) The exercisability of the Option is cumulative, but shall not exceed 100% of the shares of Company Stock subject to the Option. If the schedule set forth in the Summary of Grant would produce fractional shares of Company Stock, the number of shares of Company Stock for which the Option becomes exercisable shall be rounded down to the nearest whole share of Company Stock.

3. **Term of Option**.

(a) The Option will have a term of ten years from the Date of Grant and will terminate at the expiration of that

period, unless it is terminated at an earlier date pursuant to the provisions of this Agreement or the Plan.

(b) The Option will automatically terminate upon the happening of the first of the following events:

(i) The expiration of the 90-day period after the Participant ceases to be employed by, or provide service to, the Employer, if the termination is for any reason other than Disability, death or Cause.

(ii) The expiration of the one-year period after the Participant ceases to be employed by, or provide service to, the Employer on account of the Participant's Disability.

(iii) The expiration of the one-year period after the Participant ceases to be employed by, or provide service to, the Employer, if the Participant dies while employed by, or providing service to, the Employer or within 90 days after the Participant ceases to be so employed or provide such services on account of a termination described in subsection (i) above.

(iv) The date on which the Participant ceases to be employed by, or provide service to, the Employer for Cause. In addition, notwithstanding the prior provisions of this Section 3, if the Participant engages in conduct that constitutes Cause after the Participant's employment or service terminates, the Option will immediately terminate.

Notwithstanding the foregoing, in no event may the Option be exercised after the date that is immediately before the tenth anniversary of the Date of Grant. Any portion of the Option that is not exercisable at the time the Participant ceases to be employed by, or provide service to, the Employer will immediately terminate.

4. **Exercise Procedures**.

(a) Subject to the provisions of Sections 2 and 3 above, the Participant may exercise part or all of the exercisable Option by giving the Company written notice of intent to exercise in the manner provided in this Agreement, specifying the number of shares of Company Stock as to which the Option is to be exercised. At such time as the Committee shall determine, the Participant shall pay the Exercise Price (i) in cash, (ii) unless the Committee determines otherwise, by delivering shares of Company Stock owned by the Participant, which shall be valued at their Fair Market Value on the date of exercise, or by attestation (on a form prescribed by the Committee) to ownership of shares of Company Stock having a Fair Market Value on the date of exercise at least equal to the Exercise Price, (iii) by payment through a broker in accordance with procedures permitted by Regulation T of the Federal Reserve Board, (iv) to the extent the Option is at the time exercisable for vested shares of Company Stock and with the approval of the Committee, by surrender of all or any part of the vested shares of Company stock for which the Option is exercisable to the Company for an appreciation distribution payable in shares of Company Stock with a Fair Market Value at the time of the Option surrender equal to the dollar amount by which the then Fair Market Value of the shares of Company Stock subject to the surrendered portion exceeds the aggregate Exercise Price payable for those shares of Company Stock ("net exercise"), or (v) by such other method as the Committee may approve, to the extent permitted by applicable law. The Committee may impose from time to time such limitations as it deems appropriate on the use of shares of Company Stock to exercise the Option.

(b) The obligation of the Company to deliver shares of Company Stock upon exercise of the Option shall be subject to all applicable laws, rules, and regulations and such approvals by governmental agencies as may be deemed appropriate by the Committee, including

such actions as Company counsel shall deem necessary or appropriate to comply with relevant securities laws and regulations. The Company may require that the Participant (or other person exercising the Option after the Participant's death) represent that the Participant is purchasing shares of Company Stock for the Participant's own account and not with a view to or for sale in connection with any distribution of the shares of Company Stock, or such other representation as the Committee deems appropriate.

(c) All obligations of the Company under this Agreement shall be subject to the rights of the Company as set forth in the Plan to withhold amounts required to be withheld for any taxes, if applicable. Subject to Committee approval, the Participant may elect to satisfy any tax withholding obligation of the Employer with respect to the Option by having shares of Company Stock withheld up to an amount that does not exceed the minimum applicable withholding tax rate for federal (including FICA), state and local tax liabilities.

(d) Upon exercise of the Option (or portion thereof), the Option (or portion thereof) will terminate and cease to be outstanding.

5. **No Shareholder Rights**. Neither the Participant, nor any person entitled to exercise the Participant's rights in the event of the Participant's death, shall have any of the rights and privileges of a stockholder with respect to the shares of Company Stock subject to the Option, until certificates for shares of Company Stock have been issued upon the exercise of the Option.

6. **Change of Control**. The provisions of the Plan applicable to a Change of Control will apply to the Option, and, in the event of a Change of Control, the Committee may take such actions as it deems appropriate pursuant to the Plan; provided that, if the Option continues in effect after a Change of Control and the Participant's employment or service is terminated by the Employer without Cause upon or within 12 months following the Change in Control, any unvested portion of the Option shall become fully vested upon

such cessation of employment or service.

7. **Restrictions on Exercise**. Except as the Committee may otherwise permit pursuant to the Plan, only the Participant may exercise the Option during the Participant's lifetime and, after the Participant's death, the Option will be exercisable (subject to the limitations specified in the Plan) solely by the legal representatives of the Participant, or by the person who acquires the right to exercise the Option by will or by the laws of descent and distribution, to the extent that the Option is exercisable pursuant to this Agreement.

8. **Entire Agreement**. This Agreement contains the entire agreement of the parties with respect to the Option granted hereby and may not be changed orally but only by an instrument in writing signed by the party against whom enforcement of any change, modification or extension is sought.

9. **Grant Subject to Plan Provisions**. This grant is made pursuant to the Plan, the terms of which are incorporated herein by reference, and in all respects will be interpreted in accordance with the Plan. This grant is subject to interpretations, regulations and determinations concerning the Plan established from time to time by the Committee in accordance with the

provisions of the Plan, including, but not limited to, provisions pertaining to (a) rights and obligations with respect to withholding taxes, (b) the registration, qualification or listing of the shares, (c) changes in capitalization of the Company and (d) other requirements of applicable law. The Committee will have the authority to interpret and construe this grant pursuant to the terms of the Plan, and its decisions will be conclusive as to any questions arising hereunder.

10. **Assignment and Transfers**. Except as the Committee may otherwise permit pursuant to the Plan, the rights and interests of the Participant under this Agreement may not be sold, assigned, encumbered or otherwise transferred except, in the event of the death of the Participant, by will or by the laws of descent and distribution. In the event of any attempt by the Participant to alienate, assign, pledge, hypothecate, or otherwise dispose of the Option or any right hereunder, except as provided for in this Agreement, or in the event of the levy or any attachment, execution or similar process upon the rights or interests hereby conferred, the Company may terminate the Option by notice to the Participant, and the Option and all rights hereunder will thereupon become null and void. The rights and protections of the Company hereunder will extend to any successors or assigns of the Company and to the Company's parents, subsidiaries, and affiliates. This Agreement may be assigned by the Company without the Participant's consent.

11. **No Employment or Other Rights**. This Agreement will not confer upon the Participant any right to be retained in the employment of the Company and will not interfere in any way with the right of the Company to terminate the Participant's employment at any time. The right of the Company to terminate at will the Participant's employment at any time for any reason is specifically reserved.

12. **Notice**. Any notice to the Company provided for in this instrument will be addressed to the Company in care of the Corporate Secretary and Counsel at the Company's corporate headquarters, and any notice to the Participant will be addressed to such Participant at the current address shown on the payroll records of the Company, or to such other address as the Participant may designate to the Company in writing. Any notice will be delivered by hand, sent by telecopy or enclosed in a properly sealed envelope addressed as stated above, registered and deposited, postage prepaid, in a post office regularly maintained by the United States Postal Service.

13. **Recoupment Policy**. The Participant agrees that, subject to the requirements of applicable law, if the Participant breaches any restrictive covenant agreement between the Participant and the Employer or otherwise engages in activities that constitute Cause either while employed by, or providing service to, the Employer or within two years thereafter, the Option shall terminate, and the Company may rescind any exercise of the Option and delivery of shares upon such exercise, as applicable on such terms as the Committee shall determine, including the right to require that in the event of any such rescission, (a) the Participant shall return to the Company the shares received upon the exercise of the Option or, (b) if the Participant no longer owns the shares, the Participant shall pay to the Company the amount of any gain realized or payment received as a result of any sale or other disposition of the shares (or, in the event the Participant transfers the shares by gift or otherwise without consideration, the Fair Market Value of the shares on the date of the breach of any restrictive covenant agreement or activity constituting Cause), net of the price originally paid by the Participant for the shares. The

Participant agrees that payment by the Participant shall be made in such manner and on such terms and conditions as may be required by the Committee and the Employer shall be entitled to set off against the amount of any such payment any amounts otherwise owed to the Participant by the Employer. In addition, the Participant agrees that the Option shall be subject to any applicable clawback or recoupment policies, share trading policies and other policies that may be implemented by the Board from time to time.

14. **Applicable Law**. The validity, construction, interpretation and effect of this Agreement will be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to the conflicts of laws provisions thereof.

15. **Application of Section 409A of the Code**. This Agreement is intended to be exempt from section 409A of the Code and to the extent this Agreement is subject to section 409A of the Code, it will in all respects be administered in accordance with section 409A of the Code.

Exhibit 10.11

July 16, 2015

Mariam Morris
[ ]
[ ]

mariam@mariamcpa.com

Dear Mariam:

On behalf of Cerecor Inc., a Delaware corporation (the "Company"), we are pleased to offer you a position with the Company under the terms set forth in this letter agreement (the "Agreement").

1. In General. The Company agrees to employ you commencing as of August 24, 2015 (the "Effective Date"), provided, that your employment hereunder may be earlier terminated in accordance with Section 6 below.

2. Position and Duties. During the term of your employment with the Company (the "Employment Term"), you shall serve as the Chief Financial Officer and Chief Compliance Officer ("CFO") of the Company, reporting to the Chief Executive Officer and based in Baltimore, MD. It is possible that this reporting relationship will change as the Company hires additional senior management personnel. In your capacity as CFO, you shall have the duties, authorities and responsibilities commensurate with your position, and such other duties, authorities and responsibilities as your supervisor shall designate from time to time. During the Employment Term, you shall devote all of your business time, energy and skill and your best efforts to the performance of your duties with the Company; provided, that (i) you may be a passive investor in other entities and (ii) you may engage in civic and not-for-profit activities so long as such activities do not interfere with the performance of your duties hereunder.

3. Base Salary. Beginning on the Effective Date, the Company agrees to pay you a base salary at an annual rate of not less than US$277,900, payable in accordance with the regular payroll practices of the Company. The base salary as increased from time to time shall constitute "Base Salary" for purposes of this Agreement.

(a) Reimbursement of Relocation, Transportation and Living Expenses. The Company will reimburse moving and related expenses to establish your permanent residence in Baltimore, not to exceed $20,000. The Company will also reimburse your Baltimore living expenses, up to but not exceeding $3,000 / month, for up to 6 months.

4. Bonus Compensation.

(a) Initial Stock Option Grant. Subject to final approval by the board of directors of Cerecor Inc., you shall receive an option (the "Option") to purchase shares of Cerecor common stock (the "Shares"), pursuant to the terms, conditions, and restrictions of this Agreement, the Cerecor Inc. 2011 Stock Incentive Plan (the "Stock Incentive Plan") and the restricted stock award agreement thereunder. The Option will be granted according to the guidelines to be set by the Cerecor Compensation Committee and the Company's Plan. Beginning in 2016, you will be eligible to participate in the Company's Stock Incentive Plan at an annual target set by the Board of Directors.

(i) Annual Bonus. During the Employment Term, you shall be eligible to receive a discretionary annual bonus as determined by the Board or the Compensation Committee of the Board, in its sole discretion, provided you are employed on the date such annual bonus is paid. Such bonus may consist of cash and/or grants of additional equity awards in the Company, and is intended to be substantially consistent with cash bonuses and equity award bonuses paid to executives of similar grade in similarly situated companies in the biotechnology industry, subject to the results of operations and financial condition of the Company and your level of individual performance. Your cash bonus target for 2015 will be 27.5% of your base salary, prorated for time in grade.

5. Employee Benefits. You shall be entitled to participate in any employee benefit plan that the Company has adopted or may adopt, maintain or contribute to for the benefit of its employees generally, subject to satisfying the applicable eligibility requirements. Notwithstanding the foregoing, the Company may modify or terminate any employee benefit plan at any time. In addition, you shall be entitled to paid vacation in accordance with the Company's vacation policy in effect from time to time. Upon presentation of appropriate documentation, you shall be reimbursed in accordance with the Company's expense reimbursement policy, for all reasonable business expenses incurred in connection with the performance of the your duties hereunder.

6. Termination of Employment.

(i) Death or Disability. Your employment shall immediately terminate on the date of your death or upon ten (10) days' prior written notice by the Company for Disability (as defined in the Company's long term disability plan as in effect from time to time or, if no such plan is in effect, as defined under Code Section 409A (as defined in Section 19 below)). Upon your termination due to death or Disability, you (or your estate or legal representative, if applicable) shall be entitled to the following payments and benefits: (i) any unpaid Base Salary through the date of termination, reimbursement for any unreimbursed business expenses under the Company's

expense reimbursement policy incurred through the date of termination and any accrued but unused vacation time in accordance with Company policy, payable within thirty (30) days following such

termination of employment and (ii) all other vested payments, benefits or fringe benefits to which you shall be entitled under the terms of any applicable compensation arrangement or benefit, equity or fringe benefit plan or program or grant (collectively, Sections 6(a)(i) and 6(a)(ii) hereof shall be hereafter referred to as the "Accrued Benefits").

(ii) For Cause. Your employment with the Company shall terminate immediately upon written notice by the Company for Cause. "Cause" shall mean: (i) your willful misconduct or gross negligence in the performance of your duties to the Company that, if capable of cure, is not cured within thirty (30) days of your receipt of written notice from the Company; (ii) your failure to perform your duties to the Company or to follow the lawful directives of the Board (other than as a result of death or a physical or mental incapacity) that, if capable of cure, is not cured within thirty (30) days of your receipt of written notice from the Company; (iii) your commission of, indictment for, conviction of, or pleading of guilty or *nolo contendere* to, a felony or any crime involving moral turpitude; (iv) any act of theft, fraud, malfeasance or dishonesty in connection with the performance of your duties to the Company; or; (v) a material breach of this Agreement or any other agreement with the Company, or a material violation of the Company's code of conduct or other written policy that, if capable of cure, is not cured within thirty (30) days of your receipt of written notice from the Company. Upon a termination for Cause, the Company shall pay to you the Accrued Benefits.

(iii) Without Cause. Your employment may be terminated by the Company without Cause (other than for death or Disability) immediately upon written notice by the Company. Upon a termination without Cause, the Company shall pay to you the following payments and benefits: (i) the Accrued Benefits; (ii) subject to your compliance with the obligations in Sections 7, 8 and 9 hereof, continued payment of your Base Salary as in effect immediately prior to your termination for six (6) months following such termination; (iii) full vesting of the Option; and (iv) if you timely elect and remain eligible for continued health insurance coverage under federal COBRA law or, if applicable, state insurance laws, the Company will pay your COBRA or state continuation health insurance premiums until the earliest of (x) the first anniversary of your termination; (y) expiration of your continuation coverage under COBRA; or (z) the date when you are eligible for substantially equivalent health insurance; provided, that the first payment pursuant to clauses (ii) and (iv) shall be made on the first payroll period after the thirtieth (30th) day following such termination and shall include payment of any amounts that would otherwise be due prior thereto.

(iv) For Good Reason. Your employment shall terminate upon your written notice to the Company of a termination for Good Reason. "Good Reason" shall mean, without your written consent, (i) a material diminution in your

duties, authorities or responsibilities (other than temporarily while physically or mentally incapacitated), (ii) a requirement by the Company that your principal place of work be permanently moved to a location more than fifty (50) miles away from Baltimore, Maryland, or (iii) a material breach of this Agreement, including, without limitation, a diminution of your Base Salary hereunder. You shall provide the Company with a written notice detailing the specific circumstances alleged to constitute Good Reason within thirty (30) days after the first occurrence of such circumstances, and the Company shall have thirty (30) days following the receipt of such notice to cure such alleged "Good Reason" event. If the Company does not cure such event within the cure period, you must terminate your employment within ten (10) days following the end of such cure period, or any claim of such circumstances as "Good Reason" shall be deemed irrevocably waived by you. Upon a termination for Good Reason, you shall be entitled to the payments and benefits described in Section 6(c) above.

(v) Other Obligations. Upon any termination of your employment with the Company, you shall promptly resign from the Board and any other position as an officer, director or fiduciary of any Company-related entity. Payments and benefits provided in this Section 6 shall be in lieu of any termination or severance payments or benefits for which you may be eligible under any of the plans, policies or programs of the Company or under the Worker Adjustment Retraining Notification Act of 1988 or any similar state statute or regulation.

7. Release. Any payments and benefits provided under this Agreement, including the Restricted Stock Award, beyond the Accrued Benefits shall only be payable if you execute and deliver to the Company and do not revoke a general release of claims in favor of the Company in a form reasonably satisfactory to the Company. Such release shall be executed and delivered (and no longer subject to revocation, if applicable) within sixty (60) days following termination. The Company shall deliver to you such release within seven (7) days after termination.

8. Restrictive Covenants.

(a) Confidentiality. You agree that you shall not, directly or indirectly, use, make available, sell, disclose or otherwise communicate to any person, either during your employment or at any time thereafter, any business and technical

information or trade secrets, nonpublic, proprietary or confidential information, knowledge or data relating to the Company, any of its subsidiaries, affiliated companies or businesses, which shall have been obtained by you during your employment by the Company (or any predecessor). This restriction shall not apply to disclosures made during the routine course of business in fulfillment of your duties during the Employment Term, as described in Section 2. The foregoing shall not apply to information that (A) was known to the public prior to its disclosure to you or (B) you are required to disclose by applicable law, regulation or legal process (provided that you provide the Company with prior notice of the contemplated

disclosure and cooperate with the Company at its expense in seeking a protective order or other appropriate protection of such information). The terms and conditions of this Agreement shall remain strictly confidential, and you hereby agree not to disclose the terms and conditions hereof to any person or entity, other than immediate family members, legal advisors or personal tax or financial advisors, or prospective future employers solely for the purpose of disclosing the limitations on your conduct imposed by the provisions of this Section 8.

(b) Non-Competition. You acknowledge that you perform services of a unique nature for the Company that are irreplaceable, and that your performance of such services to a competing business will result in irreparable harm to the Company. Accordingly, during your employment hereunder and for a period of one (1) year thereafter, you agree that you will not, directly or indirectly, own, manage, operate, control, be employed by (whether as an employee, consultant, independent contractor or otherwise, and whether or not for compensation) or render services to any person, firm, corporation or other entity, in whatever form, engaged in competition with the Company or any of its subsidiaries or affiliates or in any other material business in which the Company or any of its subsidiaries or affiliates is engaged on the date of termination or in which they have planned, on or prior to such date, to be engaged in on or after such date, in any locale of any country in which the Company conducts business. Notwithstanding the foregoing, nothing herein shall prohibit you from being a passive owner of not more than two percent (2%) of the equity securities of a publicly traded corporation engaged in a business that is in competition with the Company or any of its subsidiaries or affiliates.

(c) Non-Solicitation: Non-Interference. (i) During your employment with the Company and for a period of one (1) year thereafter, you agree that you shall not, directly or indirectly, individually or on behalf of any other person, firm, corporation or other entity, solicit, aid or induce any customer of the Company or any of its subsidiaries or affiliates to purchase goods or services then sold by the Company or any of its subsidiaries or affiliates from another person, firm, corporation or other entity or assist or aid any other persons or entity in identifying or soliciting any such customer.

(ii) During your employment with the Company and for a period of one year thereafter, you agree that you shall not, directly or indirectly, individually or on behalf of any other person, firm, corporation or other entity, (A) solicit, aid or induce any employee, representative or agent of the Company or any of its subsidiaries or affiliates to leave such employment or retention or to accept employment with or render services to or with any other person, firm, corporation or other entity unaffiliated with the Company or directly hire or retain any such employee, representative or agent, or take any action to materially assist or aid any other person, firm, corporation or other entity in identifying, hiring or soliciting any such employee, representative or agent, or (B) interfere, or aid or induce any other person or entity in interfering, with the relationship between the Company or any of its subsidiaries or affiliates and any of their respective vendors, joint venturers or licensors. An employee, representative or agent shall be deemed covered by this Section 8(c) if such person was employed

or retained during anytime within six (6) months prior to, or after, your termination of employment.

(d) Non-Disparagement. You agree not to make negative comments or otherwise disparage the Company or its officers, directors, employees, shareholders, agents or products, in any manner likely to be harmful to them or their business, business reputation or personal reputation. The foregoing shall not be violated by truthful statements in response to legal process, required governmental testimony or filings, or administrative or arbitral proceedings (including, without limitation, depositions in connection with such proceedings).

(e) Inventions. (i) You acknowledge and agree that all ideas, methods, inventions, discoveries, improvements, work products or developments ("Inventions"), whether patentable or unpatentable, (A) that relate to your work with the Company, made or conceived by you, solely or jointly with others, during the Employment Term, or (B) suggested by any work that you perform in connection with the Company, either while performing your duties with the Company or on your own time, but only insofar as the Inventions are related to you work as an employee or other service provider to the Company, shall belong exclusively to the Company (or its designee), whether or not patent applications are filed thereon. You will keep full and complete written records (the "Records"), in the manner prescribed by the Company, of all Inventions, and will promptly disclose all Inventions completely and in writing to the Company. The Records shall be the sole and exclusive property of the Company, and you will surrender them upon the termination of the Employment Term, or upon the Company's request. You will assign to the Company the Inventions and all patents that may issue thereon in any and all countries, whether during or subsequent to the Employment Term, together with the right to file, in your name or in the name of the Company (or its designee), applications for patents and equivalent rights (the "Applications"). You will, at any time during and subsequent to the Employment Term, make such applications, sign such papers, take all rightful oaths, and perform all acts as may be requested from time to time by the Company with respect to the Inventions. You will also execute assignments to the Company (or its designee) of the Applications,

and give the Company and its attorneys all reasonable assistance (including the giving of testimony) to obtain the Inventions for its benefit, all without additional compensation to you from the Company, but entirely at the Company's expense.

(ii) In addition, the Inventions will be deemed Work for Hire, as such term is defined under the copyright laws of the United States, on behalf of the Company and you agree that the Company will be the sole owner of the Inventions, and all underlying rights therein, in all media now known or hereinafter devised, throughout the universe and in perpetuity without any further obligations to you. If the Inventions, or any portion thereof, are deemed not to be Work for Hire, you hereby irrevocably convey, transfer and assign to the Company, all rights, in all media now known or hereinafter devised, throughout the universe and in perpetuity, in and to the Inventions, including, without limitation, all of your right, title and interest in the copyrights (and all renewals, revivals and extensions

thereof) to the Inventions, including, without limitation, all rights of any kind or any nature now or hereafter recognized, including without limitation, the unrestricted right to make modifications, adaptations and revisions to the Inventions, to exploit and allow others to exploit the Inventions and all rights to sue at law or in equity for any infringement, or other unauthorized use or conduct in derogation of the Inventions, known or unknown, prior to the date hereof, including, without limitation, the right to receive all proceeds and damages therefrom. In addition, you hereby waive any so-called "moral rights" with respect to the Inventions. You hereby waive any and all currently existing and future monetary rights in and to the Inventions and all patents that may issue thereon, including, without limitation, any rights that would otherwise accrue to your benefit by virtue of you being an employee of or other service provider to the Company.

(f) Return of Company Property. On the date of your termination of employment with the Company for any reason (or at any time prior thereto at the Company's request), you shall return all property belonging to the Company or its affiliates (including, but not limited to, any Company-provided laptops, computers, cell phones, wireless electronic mail devices or other equipment, or documents and property belonging to the Company).

(g) Reformation. If it is determined by a court of competent jurisdiction in any state that any restriction in this Section 8 is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the court to render it enforceable to the maximum extent permitted by the laws of that state.

(h) Survival of Provisions. The obligations contained in Sections 8 and 9 hereof shall survive the termination or expiration of the Employment Term and your employment with the Company and shall be fully enforceable thereafter.

9. Cooperation. Upon the receipt of reasonable notice from the Company (including outside counsel), you agree that while employed by the Company and thereafter, you will respond and provide information with regard to matters in which you have knowledge as a result of your employment with the Company, and will provide reasonable assistance to the Company, its affiliates and their respective representatives in defense of any claims that may be made against the Company or its affiliates, and will assist the Company and its affiliates in the prosecution of any claims that may be made by the Company or its affiliates, to the extent that such claims may relate to the period of your employment with the Company. You agree to promptly inform the Company if you become aware of any lawsuits involving such claims that may be filed or threatened against the Company or its affiliates. You also agree to promptly inform the Company (to the extent that you are legally permitted to do so) if you are asked to assist in any investigation of the Company or its affiliates (or their actions), regardless of whether a lawsuit or other proceeding has then been filed against the Company or its affiliates with respect to such investigation, and shall not do so unless legally required. Upon presentation of appropriate documentation, the Company shall pay or reimburse you for all reasonable out-of-

pocket travel, duplicating or telephonic expenses incurred by you in complying with this Section 9.

10. Equitable Relief and Other Remedies. You acknowledge and agree that the Company's remedies at law for a breach or threatened breach of any of the provisions of Section 8 or Section 9 hereof would be inadequate and, in recognition of this fact, you agree that, in the event of such a breach or threatened breach, in addition to any remedies at law, the Company, without posting any bond, shall be entitled to equitable relief in the form of specific performance, a temporary restraining order, a temporary or permanent injunction or any other equitable remedy which may then be available. In the event of a violation by you of Section 8 or Section 9 hereof, any severance being paid to you pursuant to this Agreement or otherwise shall immediately cease, and any severance previously paid to you (other than $1,000) shall be immediately repaid to the Company.

11. No Assignments. This Agreement is personal to each of the parties hereto. Except as provided in this Section 11, no party may assign or delegate any rights or obligations hereunder without first obtaining the written consent of the other party hereto. The Company may assign this Agreement to any successor to all or substantially all of the business and/or assets of the Company.

12. Notice. For purposes of this Agreement, notices and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given (a) on the date of delivery, if delivered by hand, (b) on the date of transmission, if delivered by confirmed facsimile or electronic mail, (c) on the first business day following the date of deposit, if delivered by guaranteed

overnight delivery service, or (d) on the fourth business day following the date delivered or mailed by United States registered or certified mail, return receipt requested, postage prepaid, addressed as follows:

If to you:

At the address (or to the facsimile number) shown on the records of the Company

If to the Company:

400 East Pratt Street
Suite 606
Baltimore, MD 21202
Attention: Blake Paterson
email: bpaterson@cerecor.com

with a copy to:

Cooley LLP
777 6th Street NW · 11th Floor
Washington, DC 20001
Attention: Aaron Velli, Esq.
Fax: 202-842-7899
E-mail: avelli@cooley.com

or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notices of change of address shall be effective only upon receipt.

13. Severability. The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof.

14. Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same instrument.

15. Governing Law; Disputes. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of Delaware without regard to the choice of law principles thereof that would result in the application of the laws of any other jurisdiction. You and the Company agree that any action or proceeding to enforce or arising out of this Agreement may be commenced in the state appellate courts of New Castle County, Wilmington, Delaware or the United States District Court for the District of Delaware in Wilmington, Delaware. You and the Company consent to such jurisdiction, agree that venue will be proper in such courts and waive any objections upon *"forum non conveniens."*

16. Miscellaneous. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing and signed by you and such officer or director as may be designated by the Board. No waiver by either party hereto at any time of any breach by the other party hereto of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. This Agreement together with all exhibits hereto sets forth the entire agreement of the parties hereto in respect of the subject matter contained herein and supersedes any and all prior agreements or understandings between you and the Company with respect to the subject matter hereof. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party which are not expressly set forth in this Agreement.

17. Representations. You represent and warrant to the Company that (a) you have the legal right to enter into this Agreement and to perform all of the obligations on your part to be performed hereunder in accordance with its terms, and (b) you are not a party to any agreement or understanding, written or oral, and is not subject to any restriction, which, in either case, could prevent you from entering into this Agreement or performing all of your duties and obligations hereunder.

18. Tax Withholding. The Company may withhold from any and all amounts payable under this Agreement such federal, state and local taxes as may be required to be withheld pursuant to any applicable law or regulation.

19. Code Section 409A. (a) The intent of the parties is that payments and benefits under this Agreement comply with, or be exempt from, Internal Revenue Code Section 409A and the regulations and guidance promulgated thereunder (collectively "Code Section 409A") and,

accordingly, to the maximum extent permitted, this Agreement shall be interpreted to be in compliance therewith. In no event whatsoever shall the Company be liable for any additional tax, interest or penalty that may be imposed on you by Code Section 409A or any damages for failing to comply with Code Section 409A.

(i) A termination of employment shall not be deemed to have occurred for purposes of any provision of this Agreement providing for the payment of any amounts or benefits upon or following a termination of employment that are considered "non-qualified deferred compensation" under Code Section 409A unless such termination is also a "separation from service" within the meaning of Code Section 409A and, for purposes of any such provision of this Agreement, references to a "termination," "termination of employment" or like terms shall mean "separation from service." If you are deemed on the date of termination to be a "specified employee" within the meaning of that term under Code Section 409A(a)(2)(B), then with regard to any payment that is considered non-qualified deferred compensation under Code Section 409A payable on account of a "separation from service," such payment or benefit shall be made or provided at the date which is the earlier of (A) the expiration of the six (6)-month period measured from the date of your "separation from service", and (B) the date of your death (the "Delay Period"). Upon the expiration of the Delay Period, all payments and benefits delayed pursuant to this Section 19 (whether they would have otherwise been payable in a single sum or in installments in the absence of such delay) shall be paid or reimbursed to you in a lump sum and any remaining payments and benefits due under this Agreement shall be paid or provided in accordance with the normal payment dates specified for them herein.

(ii) With regard to any provision herein that provides for reimbursement of costs and expenses or in-kind benefits, except as permitted by Code Section 409A, (i) the right to reimbursement or in-kind benefits shall not be subject to liquidation or exchange for another benefit, (ii) the amount of expenses eligible for reimbursement, or in-kind benefits, provided during any taxable year shall not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other taxable year, provided that the foregoing clause (ii) shall not be violated with regard to expenses reimbursed under any arrangement covered by Internal Revenue Code Section 95(b) solely because such expenses are subject to a limit related to the period the arrangement is in effect and (iii) such payments shall be made on or before the last day of your taxable year following the taxable year in which the expense occurred.

(iii) For purposes of Code Section 409A, your right to receive any installment payments pursuant to this Agreement shall be treated as a right to receive a series of separate and distinct payments. In no event may you, directly or indirectly, designate the calendar year of any payment to be made under this Agreement that is considered non-qualified deferred compensation.

[END OF TEXT. SIGNATURE PAGE FOLLOWS.]

To indicate your acceptance of the Company's offer, please sign and date this letter in the space provided below and return it to Blake Paterson via email to bpaterson@cerecor.com. This offer will terminate if not accepted by you on or before July 23, 2015.

Sincerely,

Cerecor Inc.

/s/ Blake Paterson
B1ake M. Paterson
Chief Executive Officer

ACCEPTED AND AGREED:

/s/ Mariam Morris
Mariam

Date: July 17, 2015

Exhibit 10.12

INDEMNIFICATION AGREEMENT

This Indemnification Agreement, dated as of (this "***Agreement***"), is made by and between Cerecor Inc., a Delaware corporation (the "***Company***") and ("***Indemnitee***").

RECITALS:

A. The Company desires to attract and retain the services of highly qualified individuals as directors, officers, employees and agents.

B. Under Delaware law, a director or officer's right to be reimbursed for the costs of defense of criminal actions, whether such claims are asserted under state or federal law, does not depend upon the merits of the claims asserted against the director or officer and is separate and distinct from any right to indemnification the director or officer may be able to establish, and indemnification of the director or officer against criminal fines and penalties is permitted if the director or officer satisfies the applicable standard of conduct.

C. Indemnitee's willingness to serve as a director and/or officer of the Company is predicated, in substantial part, upon the Company's willingness to indemnify him/her in accordance with the principles reflected above, to the fullest extent permitted by the laws of the state of Delaware, and upon the other undertakings set forth in this Agreement.

D. Therefore, in recognition of the need to provide Indemnitee with substantial protection against personal liability, in order to procure Indemnitee's continued service as a director and/or officer of the Company and to enhance Indemnitee's ability to serve the Company in an effective manner, and in order to provide such protection pursuant to express contract rights (intended to be enforceable irrespective of, among other things, any amendment to the Company's certificate of incorporation or bylaws (collectively, the "***Constituent Documents***"), any change in the composition of the Company's Board of Directors (the "***Board***") or any change-in-control or business combination transaction relating to the Company), the Company wishes to provide in this Agreement for the indemnification of and the advancement of Expenses (as defined in Section 1(e)) to Indemnitee as set forth in this Agreement and for the continued coverage of Indemnitee under the Company's directors' and officers' liability insurance policies.

E. In light of the considerations referred to in the preceding recitals, it is the Company's intention and desire that the provisions of this Agreement be construed liberally, subject to their express terms, to maximize the protections to be provided to Indemnitee hereunder.

F. [Indemnitee has certain rights to indemnification and/or insurance provided by [FUND] and/or its affiliates which Indemnitee and [FUND] intend to be secondary to the

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primary obligation of the Company to indemnify Indemnitee as provided herein.](1)

G**.** This Agreement supersedes and replaces in its entirety any previous Indemnification Agreement entered into between the Company and the Indemnitee.

AGREEMENT:

NOW, THEREFORE, the parties hereby agree as follows:

1. Certain Definitions. In addition to terms defined elsewhere herein, the following terms have the following meanings when used in this Agreement with initial capital letters:

(a) ***"Change in Control"*** means the occurrence after the date of this Agreement of any of the following events:

(i) the consummation of a reorganization, merger or consolidation, or sale or other disposition of all or substantially all of the assets of the Company or the acquisition of assets of another corporation, or other transaction (each, a ***"Business Combination"***), unless, in each case, immediately following such Business Combination A) all or substantially all of the beneficial owners of voting stock of the Company immediately prior to such Business Combination beneficially own, directly or indirectly, more than 60% of the combined voting power of the then outstanding shares of voting stock of the entity resulting from such Business Combination or

(ii) approval by the stockholders of the Company of a complete liquidation or dissolution of the Company.

(b) ***"Incumbent Directors"*** means the individuals who, as of the date hereof, are Directors of the Company and any individual becoming a Director subsequent to the date hereof whose election, nomination for election by the Company's stockholders, or appointment, was approved by a vote of at least two-thirds of the then Incumbent Directors (either by a specific vote or by approval of the proxy statement of the Company in which such person is named as a nominee for director, without objection to such nomination).

(c) **"*Claim*"** means (i) any threatened, asserted, pending or completed claim, demand, action, suit or proceeding, whether civil, criminal, administrative, arbitrative, investigative or other, and whether made pursuant to federal, state or other law; and

(ii) any inquiry or investigation, whether made, instituted or conducted by the Company or any other party, including without limitation any federal, state or other governmental entity, that Indemnitee determines might lead to the institution of any such claim, demand, action, suit or proceeding.

(d) "***Disinterested Director***" means a director of the Company who is not and was not a party to the Claim in respect of which indemnification is sought by Indemnitee.

(e) **"*Expenses*"** means attorneys' and experts' fees and expenses and all other costs and expenses paid or payable in connection with investigating, defending, being a witness

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(1) Only applicable if the director has rights to indemnification, advancement of expenses and/or insurance provided by or through investment fund(s).

in or participating in (including on appeal), or preparing to investigate, defend, be a witness in or participate in (including on appeal), any Claim.

(f) **"*Indemnifiable Claim*"** means any Claim based upon, arising out of or resulting from (i) any actual, alleged or suspected act or failure to act by Indemnitee in his or her capacity as a director, officer, employee or agent of the Company or as a director, officer, employee, member, manager, trustee or agent of any other corporation, limited liability company, partnership, joint venture, trust or other entity or enterprise, whether or not for profit, as to which Indemnitee is or was serving at the request of the Company as a director, officer, employee, member, manager, trustee or agent, (ii) any actual, alleged or suspected act or failure to act by Indemnitee in respect of any business, transaction, communication, filing, disclosure or other activity of the Company or any other entity or enterprise referred to in clause (i) of this sentence, or (iii) Indemnitee's status as a current or former director, officer, employee or agent of the Company or as a current or former director, officer, employee, member, manager, trustee or agent of the Company or any other entity or enterprise referred to in clause (i) of this sentence or any actual, alleged or suspected act or failure to act by Indemnitee in connection with any obligation or restriction imposed upon Indemnitee by reason of such status.

(g) ***"Indemnifiable Losses"*** means any and all Losses relating to, arising out of or resulting from any Indemnifiable Claim.

(h) "***Independent Counsel***" means a law firm, or a member of a law firm, that is experienced in matters of corporation law and neither presently is, nor in the past five years has been, retained to represent: (i) the Company or Indemnitee in any matter material to either such party (other than with respect to matters concerning the Indemnitee under this Agreement, or of other indemnitees under similar indemnification agreements), or (ii) any other party to the Indemnifiable Claim giving rise to a claim for indemnification hereunder. Notwithstanding the foregoing, the term "Independent Counsel" shall not include any person who, under the applicable standards of professional conduct then prevailing, would have a conflict of interest in representing either the Company or Indemnitee in an action to determine Indemnitee's rights under this Agreement.

(i) "***Losses***" means any and all Expenses, damages, losses, liabilities, judgments, fines, penalties (whether civil, criminal or other) and amounts paid in settlement, including without limitation all interest, assessments and other charges paid or payable in connection with or in respect of any of the foregoing.

(j) ***"Subsidiary"*** means an entity in which the Company directly or indirectly beneficially owns 50% or more of the outstanding Voting Stock.

(k) ***"Voting Stock"*** means securities entitled to vote generally in the election of directors (or similar governing bodies).

2. Indemnification Obligation. Subject to Section 7, the Company shall indemnify, defend and hold harmless Indemnitee, to the fullest extent permitted by the laws of the State of Delaware in effect on the date hereof or as such laws may from time to time hereafter be amended to increase the scope of such permitted indemnification, against any and all Indemnifiable Claims and Indemnifiable Losses; *provided*, *however*, that, except as provided in Sections 5 and 20, Indemnitee shall not be entitled to indemnification pursuant to this Agreement in connection with any Claim initiated by Indemnitee against the Company or any director or

officer of the Company unless the Company has joined in or consented to the initiation of such Claim.

3. Advancement of Expenses. Indemnitee shall have the right to advancement by the Company prior to the final disposition of any Indemnifiable Claim of any and all Expenses relating to any Indemnifiable Claim paid or incurred by Indemnitee or which Indemnitee determines are reasonably likely to be paid or incurred by Indemnitee. Indemnitee's right to such advancement is not subject to the satisfaction of any standard of conduct. Without limiting the generality or effect of the foregoing, within five business days after any request by Indemnitee, the Company shall, in accordance with such request, (a) pay such Expenses on behalf of Indemnitee, (b) advance to Indemnitee funds in an amount sufficient to pay such Expenses, or (c) reimburse Indemnitee for such Expenses; *provided* that Indemnitee shall repay, without interest, any amounts actually advanced to Indemnitee that, at the final disposition of the

Indemnifiable Claim to which the advance related, were in excess of amounts paid or payable by Indemnitee in respect of Expenses relating to from such Indemnifiable Claim. In connection with any such payment, advancement or reimbursement, Indemnitee shall execute and deliver to the Company an undertaking, which need not be secured and shall be accepted without reference to Indemnitee's ability to repay the Expenses, by or on behalf of the Indemnitee, to repay any Expenses to the extent that amounts paid, advanced or reimbursed by the Company following the final disposition of such Indemnifiable Claim if Indemnitee shall have been determined, pursuant to Section 7, not to be entitled to indemnification hereunder.

4. Indemnification for Additional Expenses. The Company shall also indemnify against and, if requested by Indemnitee, shall reimburse Indemnitee for, or advance to Indemnitee, within five business days of such request, any Expenses paid or incurred by Indemnitee or which Indemnitee determines he or she is reasonably likely to pay or incur in connection with any Claim by Indemnitee for (a) indemnification or reimbursement or advance payment of Expenses by the Company under any provision of this Agreement, or under any other agreement or provision of the Constituent Documents now or hereafter in effect relating to Indemnifiable Claims, and/or (b) recovery under any directors' and officers' liability insurance policies maintained by the Company, regardless in each case of whether Indemnitee ultimately is determined to be entitled to such indemnification, reimbursement, advance or insurance recovery, as the case may be; *provided*, *however*, that Indemnitee shall return, without interest, any such advance of Expenses (or portion thereof) which remains unspent at the final disposition of the Claim to which the advance related.

5. Partial Indemnity. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of any Indemnifiable Loss but not for all of the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion thereof to which Indemnitee is entitled.

6. Procedure for Notification. To obtain indemnification under this Agreement in respect of an Indemnifiable Claim or Indemnifiable Loss, Indemnitee shall submit to the Company a written request therefor, including a brief description (based upon information then available to Indemnitee) of such Indemnifiable Claim or Indemnifiable Loss. If, at the time of the receipt of such request, the Company has directors' and officers' liability insurance in effect under which coverage for such Indemnifiable Claim or Indemnifiable Loss is potentially available, the Company shall give prompt written notice of such Indemnifiable Claim or Indemnifiable Loss to the applicable insurers in accordance with the procedures set forth in the

applicable policies. The Company shall provide to Indemnitee a copy of such notice delivered to the applicable insurers, and copies of all subsequent correspondence between the Company and such insurers regarding the Indemnifiable Claim or Indemnifiable Loss, in each case substantially concurrently with the delivery or receipt thereof by the Company. The failure by Indemnitee to timely notify the Company of any Indemnifiable Claim or Indemnifiable Loss shall not relieve the Company from any liability hereunder unless, and only to the extent that, the Company did not otherwise learn of such Indemnifiable Claim or Indemnifiable Loss and such failure results in forfeiture by the Company of substantial defenses, rights or insurance coverage.

7. Determination of Right to Indemnification.

(a) To the extent that Indemnitee shall have been successful on the merits or otherwise in defense of any Indemnifiable Claim or any portion thereof or in defense of any issue or matter therein, including without limitation dismissal without prejudice, Indemnitee shall be indemnified against all Indemnifiable Losses relating to such Indemnifiable Claim in accordance with Section 2 and no Standard of Conduct Determination (as defined in Section 7(b)) shall be required.

(b) To the extent that the provisions of Section 7(a) are inapplicable to an Indemnifiable Claim that shall have been finally disposed of, any determination of whether Indemnitee has satisfied any applicable standard of conduct under Delaware law that is a legally required condition to indemnification of Indemnitee hereunder against Indemnifiable Losses relating to such Indemnifiable Claim (a "***Standard of Conduct Determination***") shall be made as follows: (i) unless a Change in Control has occurred, (A) by a majority vote of the Disinterested Directors, even if less than a quorum of the Board, (B) if there are no such Disinterested Directors, by Independent Counsel in a written opinion addressed to the Board, a copy of which shall be delivered to Indemnitee; and (ii) if a Change in Control shall has occurred by Independent Counsel in a written opinion addressed to the Board, a copy of which shall be delivered to Indemnitee. The Company shall indemnify and hold harmless Indemnitee against and, if requested by Indemnitee, shall reimburse Indemnitee for, or advance to Indemnitee, within five business days of such request, any and all costs and expenses (including attorneys' and experts' fees and expenses) incurred by Indemnitee in cooperating with the person or persons making such Standard of Conduct Determination.

(c) The Company shall use its reasonable best efforts to cause any Standard of Conduct Determination required under Section 7(b) to be made as promptly as practicable. If the person or persons determined under Section 7 to make the Standard of Conduct Determination shall not have made a determination within 30 days after the later of (A) receipt by the Company of written notice from Indemnitee advising the Company of the final disposition of the applicable Indemnifiable Claim (the date of such receipt being the "***Notification Date***") and (B) the selection of an Independent Counsel, if such determination is to be made by Independent Counsel, then Indemnitee shall be deemed to have satisfied the applicable standard of conduct; *provided* that such 30-day period may be extended for a reasonable time, not to exceed an additional 30 days, if the person or persons making such determination in good faith requires such additional time to obtain or evaluate information relating thereto.

(d) If (i) Indemnitee shall be entitled to indemnification pursuant to Section 7(a), (ii) no determination of whether Indemnitee has satisfied any applicable standard of conduct under Delaware law is a legally required condition to indemnification of Indemnitee

hereunder against any Indemnifiable Losses, or (iii) Indemnitee has been determined or deemed pursuant to Section 7(b) or (c) to have satisfied any applicable standard of conduct under Delaware law which is a legally required condition to indemnification of Indemnitee then the Company shall pay to Indemnitee, within five business days after the later of (x) the Notification Date regarding the Indemnifiable Claim giving rise to the Indemnifiable Losses and (y) the earliest date on which the applicable criterion specified in clause (i), (ii) or (iii) is satisfied, an amount equal to such Indemnifiable Losses.

(e) If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 7(b)(i), the Independent Counsel shall be selected by the Board, and the Company shall give written notice to Indemnitee advising him or her of the identity of the Independent Counsel so selected. If a Standard of Conduct Determination is to be made by Independent Counsel pursuant to Section 7(b)(ii), the Independent Counsel shall be selected by Indemnitee, and Indemnitee shall give written notice to the Company advising it of the identity of the Independent Counsel so selected. In either case, Indemnitee or the Company, as applicable, may, within five business days after receiving written notice of selection from the other, deliver to the other a written objection to such selection; *provided*, *however*, that such objection may be asserted only on the ground that the Independent Counsel so selected does not satisfy the criteria set forth in the definition of "Independent Counsel" in Section 1(h), and the objection shall set forth with particularity the factual basis of such assertion. Absent a proper and timely objection, the person or firm so selected shall act as Independent Counsel. If such written objection is properly and timely made and substantiated, (i) the Independent Counsel so selected may not serve as Independent Counsel unless and until such objection is withdrawn or a court has determined that such objection is without merit and (ii) the non-objecting party may, at its option, select an alternative Independent Counsel and give written notice to the other party advising such other party of the identity of the alternative Independent Counsel so selected, in which case the provisions of the two immediately preceding sentences and clause (i) of this sentence shall apply to such subsequent selection and notice. If applicable, the provisions of clause (ii) of the immediately preceding sentence shall apply to successive alternative selections. If no Independent Counsel that is permitted under the foregoing provisions of this Section 7(e) to make the Standard of Conduct Determination shall have been selected within 30 days after the Company gives its initial notice pursuant to the first sentence of this Section 7(e) or Indemnitee gives its initial notice pursuant to the second sentence of this Section 7(e), as the case may be, either the Company or Indemnitee may petition the Court of Chancery of the State of Delaware for resolution of any objection which shall have been made by the Company or Indemnitee to the other's selection of Independent Counsel and/or for the appointment as Independent Counsel of a person selected by the Court or by such other person as the Court shall designate, and the person or firm with respect to whom all objections are so resolved or the person or firm so appointed will act as Independent Counsel. In all events, the Company shall pay all of the reasonable fees and expenses of the Independent Counsel incurred in connection with the Independent Counsel's determination pursuant to Section 7(b).

8. Presumption of Entitlement.

(a) In making any Standard of Conduct Determination, the person or persons making such determination shall presume that Indemnitee has satisfied the applicable standard of conduct, and the Company may overcome such presumption only by its adducing clear and convincing evidence to the contrary. Any Standard of Conduct Determination that is adverse to

Indemnitee may be challenged by the Indemnitee in the Court of Chancery of the State of Delaware. No determination by the Company (including by its directors or any Independent Counsel) that Indemnitee has not satisfied any applicable standard of conduct shall be a defense to any Claim by Indemnitee for indemnification or reimbursement or advance payment of Expenses by the Company hereunder or create a presumption that Indemnitee has not met any applicable standard of conduct.

9. No Other Presumption. For purposes of this Agreement, the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of *nolo contendere* or its equivalent, will not create a presumption that Indemnitee did not meet any applicable standard of conduct or that indemnification hereunder is otherwise not permitted.

10. Non-Exclusivity. The rights of Indemnitee hereunder will be in addition to any other rights Indemnitee may have under the Constituent Documents, or the substantive laws of the Company's jurisdiction of incorporation, any other contract or otherwise (collectively, "***Other Indemnity Provisions***"); *provided*, *however*, that (a) to the extent that Indemnitee otherwise would have any greater right to indemnification under any Other Indemnity Provision, Indemnitee will be deemed to have such greater right hereunder and (b) to the extent that any change is made to any Other Indemnity Provision which permits any greater right to indemnification than that provided under this Agreement as of the date hereof, Indemnitee will be deemed to have such greater right hereunder. The Company will not adopt any amendment to any of the Constituent Documents the effect of which would be to deny, diminish or encumber Indemnitee's right to indemnification under this Agreement or any Other Indemnity Provision. [Without limitation of the foregoing, the Company hereby acknowledges that Indemnitee has certain rights to indemnification, advancement of expenses and/or insurance provided by [FUND] and certain of its affiliates (collectively, the "***Fund Indemnitors***"). The Company hereby agrees that it (i) is, relative to the Fund Indemnitors, the indemnitor of first resort (i.e., its obligations to Indemnitee under this Agreement are primary and any duplicative, overlapping or corresponding obligations of the Fund Indemnitors are secondary), (ii) shall be required to make all advances and other payments under this Agreement, and shall be fully liable therefor, without regard to any rights Indemnitee may have against the Fund Indemnitors, and (iii) irrevocably waives, relinquishes and releases the Fund Indemnitors from any and all claims against the Fund Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Fund Indemnitors on behalf of Indemnitee with respect to any claim for which Indemnitee has sought indemnification from the Company shall affect the foregoing and the Fund Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of Indemnitee against the Company. The Company and Indemnitee agree that the Fund Indemnitors are express third party beneficiaries of the terms of this Section 10.](2)

11. Liability Insurance and Funding. For the duration of Indemnitee's service as a director and/or officer of the Company, and thereafter for so long as Indemnitee shall be subject to any pending or possible Indemnifiable Claim, the Company shall use commercially reasonable efforts (taking into account the scope and amount of coverage available relative to the cost

(2) Only applicable if the director has rights to indemnification, advancement of expenses and/or insurance provided by or through investment fund(s).

thereof) to cause to be maintained in effect policies of directors' and officers' liability insurance providing coverage for directors and/or officers of the Company that is at least substantially comparable in scope and amount to that provided by the Company's current policies of directors' and officers' liability insurance. The Company shall provide Indemnitee with a copy of all directors' and officers' liability insurance applications, binders, policies, declarations, endorsements and other related materials, and shall provide Indemnitee with a reasonable opportunity to review and comment on the same. Without limiting the generality or effect of the two immediately preceding sentences, the Company shall not discontinue or significantly reduce the scope or amount of coverage from one policy period to the next (i) without the prior approval thereof by a majority vote of the Incumbent Directors, even if less than a quorum, or (ii) if at the time that any such discontinuation or significant reduction in the scope or amount of coverage is proposed there are no Incumbent Directors, without the prior written consent of Indemnitee (which consent shall not be unreasonably withheld or delayed). In all policies of directors' and officers' liability insurance obtained by the Company, Indemnitee shall be named as an insured in such a manner as to provide Indemnitee the same rights and benefits, subject to the same limitations, as are accorded to the Company's directors and officers most favorably insured by such policy. The Company may, but shall not be required to, create a trust fund, grant a security interest or use other means, including without limitation a letter of credit, to ensure the payment of such amounts as may be necessary to satisfy its obligations to indemnify and advance expenses pursuant to this Agreement.

12. Subrogation. [Except as provided in Section 10,](3) in the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the related rights of recovery of Indemnitee against other persons or entities (other than Indemnitee's successors), including any entity or enterprise referred to in clause (i) of the definition of "Indemnifiable Claim" in Section 1(f). Indemnitee shall execute all papers reasonably required to evidence such rights (all of Indemnitee's reasonable Expenses, including attorneys' fees and charges, related thereto to be reimbursed by or, at the option of Indemnitee, advanced by the Company).

13. No Duplication of Payments. [Except as provided in Section 10,](4) the Company shall not be liable under this Agreement to make any payment to Indemnitee in respect of any Indemnifiable Losses to the extent Indemnitee has otherwise actually received payment (net of Expenses incurred in connection therewith) under any insurance policy, the Constituent Documents and Other Indemnity Provisions or otherwise.

14. Defense of Claims. The Company shall be entitled to participate in the defense of any Indemnifiable Claim or to assume the defense thereof, with counsel reasonably satisfactory to the Indemnitee; *provided* that if Indemnitee believes, after consultation with counsel selected by Indemnitee, that (a) the use of counsel chosen by the Company to represent Indemnitee would present such counsel with an actual or potential conflict, (b) the named parties in any such Indemnifiable Claim (including any impleaded parties) include both the Company and Indemnitee and that there may be one or more legal defenses available to Indemnitee that are different from or in addition to those available to the Company, or (c) any such representation by

(3) Only applicable if the director has rights to indemnification, advancement of expenses and/or insurance provided by or through investment fund(s).
(4) Only applicable if the director has rights to indemnification, advancement of expenses and/or insurance provided by or through investment fund(s).

such counsel would be precluded under the applicable standards of professional conduct then prevailing, then Indemnitee shall be entitled to retain separate counsel (but not more than one law firm plus, if applicable, local counsel in respect of any particular Indemnifiable Claim) at the Company's expense. The Company shall not be liable to Indemnitee under this Agreement for any amounts paid in settlement of any threatened or pending Indemnifiable Claim effected without the Company's prior written consent. The Company shall not, without the prior written consent of the Indemnitee, effect any settlement of any threatened or pending Indemnifiable Claim which the Indemnitee is or could have been a party unless such settlement solely involves the payment of money and includes a complete and unconditional release of the Indemnitee from all liability on any claims that are the subject matter of such Indemnifiable Claim. Neither the Company nor Indemnitee shall unreasonably withhold its consent to any proposed settlement; *provided* that Indemnitee may withhold consent to any settlement that does not provide a complete and unconditional release of Indemnitee.

15. Successors and Binding Agreement. (a) The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation, reorganization or otherwise) to all or substantially all of the business or assets of the Company, by agreement in form and substance satisfactory to Indemnitee and his or her counsel, expressly to assume and agree to perform this Agreement in the same manner and to the same extent the Company would be required to perform if no such succession had taken place. This Agreement shall be binding upon and inure to the benefit of the Company and any successor to the Company, including without limitation any person acquiring directly or indirectly all or substantially all of the business or assets of the Company whether by purchase, merger, consolidation, reorganization or otherwise (and such successor will thereafter be deemed the "***Company***" for purposes of this

Agreement), but shall not otherwise be assignable or delegatable by the Company.

(b) This Agreement shall inure to the benefit of and be enforceable by the Indemnitee's personal or legal representatives, executors, administrators, heirs, distributees, legatees and other successors.

(c) This Agreement is personal in nature and neither of the parties hereto shall, without the consent of the other, assign or delegate this Agreement or any rights or obligations hereunder except as expressly provided in Sections 15(a) and 15(b). Without limiting the generality or effect of the foregoing, Indemnitee's right to receive payments hereunder shall not be assignable, whether by pledge, creation of a security interest or otherwise, other than by a transfer by the Indemnitee's will or by the laws of descent and distribution, and, in the event of any attempted assignment or transfer contrary to this Section 15(c), the Company shall have no liability to pay any amount so attempted to be assigned or transferred.

16. Notices. For all purposes of this Agreement, all communications, including without limitation notices, consents, requests or approvals, required or permitted to be given hereunder shall be in writing and shall be deemed to have been duly given when hand delivered or dispatched by electronic facsimile transmission (with receipt thereof orally confirmed), or five business days after having been mailed by United States registered or certified mail, return receipt requested, postage prepaid or one business day after having been sent for next-day delivery by a nationally recognized overnight courier service, addressed to the Company (to the attention of the Secretary of the Company) and to Indemnitee at the addresses shown on the signature page hereto, or to such other address as any party may have furnished to the other in

writing and in accordance herewith, except that notices of changes of address will be effective only upon receipt.

17. Governing Law. The validity, interpretation, construction and performance of this Agreement shall be governed by and construed in accordance with the substantive laws of the State of Delaware, without giving effect to the principles of conflict of laws of such State. The Company and Indemnitee each hereby irrevocably consent to the jurisdiction of the Chancery Court of the State of Delaware for all purposes in connection with any action or proceeding which arises out of or relates to this Agreement and agree that any action instituted under this Agreement shall be brought only in the Chancery Court of the State of Delaware.

18. Validity. If any provision of this Agreement or the application of any provision hereof to any person or circumstance is held invalid, unenforceable or otherwise illegal, the remainder of this Agreement and the application of such provision to any other person or circumstance shall not be affected, and the provision so held to be invalid, unenforceable or otherwise illegal shall be reformed to the extent, and only to the extent, necessary to make it enforceable, valid or legal. In the event that any court or other adjudicative body shall decline to reform any provision of this Agreement held to be invalid, unenforceable or otherwise illegal as contemplated by the immediately preceding sentence, the parties thereto shall take all such action as may be necessary or appropriate to replace the provision so held to be invalid, unenforceable or otherwise illegal with one or more alternative provisions that effectuate the purpose and intent of the original provisions of this Agreement as fully as possible without being invalid, unenforceable or otherwise illegal.

19. Miscellaneous. No provision of this Agreement may be waived, modified or discharged unless such waiver, modification or discharge is agreed to in writing signed by Indemnitee and the Company. No waiver by either party hereto at any time of any breach by the other party hereto or compliance with any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, expressed or implied with respect to the subject matter hereof have been made by either party that are not set forth expressly in this Agreement. References to Sections are to references to Sections of this Agreement.

20. Legal Fees and Expenses. It is the intent of the Company that Indemnitee not be required to incur legal fees and or other Expenses associated with the interpretation, enforcement or defense of Indemnitee's rights under this Agreement by litigation or otherwise because the cost and expense thereof would substantially detract from the benefits intended to be extended to Indemnitee hereunder. Accordingly, without limiting the generality or effect of any other provision hereof, if it should appear to Indemnitee that the Company has failed to comply with any of its obligations under this Agreement or in the event that the Company or any other person takes or threatens to take any action to declare this Agreement void or unenforceable, or institutes any litigation or other action or proceeding designed to deny, or to recover from, Indemnitee the benefits provided or intended to be provided to Indemnitee hereunder, the Company irrevocably authorizes the Indemnitee from time to time to retain counsel of Indemnitee's choice, at the expense of the Company as hereafter provided, to advise and represent Indemnitee in connection with any such interpretation, enforcement or defense, including without limitation the initiation or defense of any litigation or other legal action, whether by or against the Company or any director, officer, stockholder or other person affiliated

with the Company, in any jurisdiction. Notwithstanding any existing or prior attorney-client relationship between the Company and such counsel, the Company irrevocably consents to Indemnitee's entering into an attorney-client relationship with such counsel, and in that connection the Company and Indemnitee agree that a confidential relationship shall exist between Indemnitee and such counsel. Without respect to whether Indemnitee prevails, in whole or in part, in connection with any of the foregoing, the Company will pay and be solely financially responsible for any and all attorneys' and related fees and expenses incurred by Indemnitee in connection with any of the foregoing.

21. Certain Interpretive Matters. No provision of this Agreement shall be interpreted in favor of, or against, either of the

parties hereto by reason of the extent to which any such party or its counsel participated in the drafting thereof or by reason of the extent to which any such provision is inconsistent with any prior draft hereof or thereof.

22. Counterparts. This Agreement may be executed in one or more counterparts, each of which will be deemed to be an original but all of which together shall constitute one and the same agreement.

IN WITNESS WHEREOF, Indemnitee has executed and the Company has caused its duly authorized representative to execute this Agreement as of the date first above written.

CERECOR INC.

By: _____
Name: _____
Title: _____

INDEMNITEE

_____
Signature of Indemnitee

_____
Print or Type Name of Indemnitee

Exhibit 10.13

Director Indemnification Agreements

The following current directors of Cerecor Inc. are each a party to a Director Indemnification Agreement with Cerecor Inc. Such Director Indemnification Agreements are consistent in all material respects with the Form of Director Indemnification Agreement which is filed as Exhibit 10.12 to Amendment No. 1 to Cerecor Inc.'s Registration Statement on Form S-1 (File No. 333-204905) filed on June 12, 2015.

Directors:

Eugene A. Bauer
Isaac Blech
Phil Gutry
Uli Hacksell
Blake M. Paterson
Magnus Persson
Behshad Sheldon

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated April 29, 2015 (except for the third and fourth paragraph of Note 14, as to which the date is September 4, 2015), in Amendment No. 1 to the Registration Statement (Form S-1 No. 333-204905) and related Prospectus of Cerecor Inc. for the registration of its Common Stock.

/s/ Ernst & Young LLP

Baltimore, Maryland
September 4, 2015